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SEQUENCE LISTING

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 Bork, Peer
 Yuan, Yan Ping

<120> Compounds and Methods Useful for Detection and Treatment of
 Cancer

<130> 03528.0145.00US00

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<151> 2002-04-18

<160> 117

<170> PatentIn version 3.2

<210> 1

<211> 320

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 1

Met Gln Arg Pro Asn Ala His Arg Ile Ser Gln Pro Ile Arg Gln Ile
 1 5 10 15

Ile Tyr Gly Leu Leu Leu Asn Ala Ser Pro His Leu Asp Lys Thr Ser
 20 25 30

Trp Asn Ala Leu Pro Pro Gln Pro Leu Ala Phe Ser Glu Val Glu Arg
 35 40 45

Ile	Asn	Lys	Asn	Ile	Arg	Thr	Ser	Ile	Ile	Asp	Ala	Val	Glu	Leu	Ala
50						55				60					
Lys	Asp	His	Ser	Asp	Leu	Ser	Arg	Leu	Thr	Glu	Leu	Ser	Leu	Arg	Arg
65					70					75					80
Arg	Gln	Met	Leu	Leu	Leu	Glu	Thr	Leu	Lys	Val	Lys	Gln	Thr	Ile	Leu
				85					90					95	
Glu	Pro	Ile	Pro	Thr	Ser	Leu	Lys	Leu	Pro	Ile	Ala	Val	Ser	Cys	Tyr
			100				105						110		
Trp	Leu	Gln	His	Thr	Glu	Thr	Lys	Ala	Lys	Leu	His	His	Leu	Gln	Ser
		115					120					125			
Leu	Leu	Leu	Thr	Met	Leu	Val	Gly	Pro	Leu	Ile	Ala	Ile	Ile	Asn	Ser
	130					135					140				
Pro	Gly	Lys	Glu	Glu	Leu	Gln	Glu	Asp	Gly	Ala	Lys	Met	Leu	Tyr	Ala
145					150					155					160
Glu	Phe	Gln	Arg	Val	Lys	Ala	Gln	Thr	Arg	Leu	Gly	Thr	Arg	Leu	Asp
				165					170					175	
Leu	Asp	Thr	Ala	His	Ile	Phe	Cys	Gln	Trp	Gln	Ser	Cys	Leu	Gln	Met
			180					185					190		
Gly	Met	Tyr	Leu	Asn	Gln	Leu	Leu	Ser	Thr	Pro	Leu	Pro	Glu	Pro	Asp
		195					200					205			
Leu	Thr	Arg	Leu	Tyr	Ser	Gly	Ser	Leu	Val	His	Gly	Leu	Cys	Gln	Gln
	210					215					220				
Leu	Leu	Ala	Ser	Thr	Ser	Val	Glu	Ser	Leu	Leu	Ser	Ile	Cys	Pro	Glu
225					230					235					240
Ala	Lys	Gln	Leu	Tyr	Glu	Tyr	Leu	Phe	Asn	Ala	Thr	Arg	Ser	Tyr	Ala
				245					250					255	
Pro	Ala	Glu	Ile	Phe	Leu	Pro	Lys	Gly	Arg	Ser	Asn	Ser	Lys	Lys	Lys
			260					265					270		
Arg	Gln	Lys	Lys	Gln	Asn	Thr	Ser	Cys	Ser	Lys	Asn	Arg	Gly	Arg	Thr
		275					280					285			
Thr	Ala	His	Thr	Lys	Cys	Trp	Tyr	Glu	Gly	Asn	Asn	Arg	Phe	Gly	Leu
						295					300				
Leu	Met	Val	Glu	Asn	Leu	Glu	Glu	His	Ser	Glu	Ala	Ser	Asn	Ile	Glu
305					310						315				320

<210> 2

<211> 304

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 2

Met Gln Arg Pro Asn Ala His Arg Ile Ser Gln Pro Ile Arg Gln Ile
1 5 10 15

Ile Tyr Gly Leu Leu Leu Asn Ala Ser Pro His Leu Asp Lys Thr Ser
20 25 30

Trp Asn Ala Leu Pro Pro Gln Pro Leu Ala Phe Ser Glu Val Glu Arg
35 40 45

Ile Asn Lys Asn Ile Arg Thr Ser Ile Ile Asp Ala Val Glu Leu Ala
50 55 60

Lys Asp His Ser Asp Leu Ser Arg Leu Thr Glu Leu Ser Leu Arg Arg
65 70 75 80

Arg Gln Met Leu Leu Leu Glu Thr Leu Lys Val Lys Gln Thr Ile Leu
85 90 95

Glu Pro Ile Pro Thr Ser Leu Lys Leu Pro Ile Ala Val Ser Cys Tyr
100 105 110

Trp Leu Gln His Thr Glu Thr Lys Ala Lys Leu His His Leu Gln Ser
115 120 125

Leu Leu Leu Thr Met Leu Val Gly Pro Leu Ile Ala Ile Ile Asn Ser
130 135 140

Pro Gly Lys Glu Glu Leu Gln Glu Asp Gly Ala Lys Met Leu Tyr Ala
145 150 155 160

Glu Phe Gln Arg Val Lys Ala Gln Thr Arg Leu Gly Thr Arg Leu Asp
165 170 175

Leu Asp Thr Ala His Ile Phe Cys Gln Trp Gln Ser Cys Leu Gln Met
180 185 190

Gly Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu Pro Glu Pro Asp
195 200 205

Leu Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly Leu Cys Gln Gln
210 215 220

Leu Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser Ile Cys Pro Glu
 225 230 235 240
 Ala Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala Thr Arg Ser Tyr Ala
 245 250 255
 Pro Ala Glu Ile Phe Leu Pro Lys Gly Arg Ser Asn Ser Lys Lys Lys
 260 265 270
 Gly Arg Arg Asn Arg Ile Pro Ala Val Leu Arg Thr Glu Gly Glu Pro
 275 280 285
 Leu His Thr Pro Ser Val Gly Met Arg Glu Thr Thr Gly Leu Gly Cys
 290 295 300

<210> 3
 <211> 282
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 3
 Met Gln Arg Pro Asn Ala His Arg Ile Ser Gln Pro Ile Arg Gln Ile
 1 5 10 15
 Ile Tyr Gly Leu Leu Leu Asn Ala Ser Pro His Leu Asp Lys Thr Ser
 20 25 30
 Trp Asn Ala Leu Pro Pro Gln Pro Leu Ala Phe Ser Glu Val Glu Arg
 35 40 45
 Ile Asn Lys Asn Ile Arg Thr Ser Ile Ile Asp Ala Val Glu Leu Ala
 50 55 60
 Lys Asp His Ser Asp Leu Ser Arg Leu Thr Glu Leu Ser Leu Arg Arg
 65 70 75 80
 Arg Gln Met Leu Leu Leu Glu Thr Leu Lys Val Lys Gln Thr Ile Leu
 85 90 95
 Glu Pro Ile Pro Thr Ser Leu Lys Leu Pro Ile Ala Val Ser Cys Tyr
 100 105 110
 Trp Leu Gln His Thr Glu Thr Lys Ala Lys Leu His His Leu Gln Ser
 115 120 125
 Leu Leu Leu Thr Met Leu Val Gly Pro Leu Ile Ala Ile Ile Asn Ser

130	135	140
Pro Gly Lys Glu Glu Leu Gln Glu Asp Gly Ala Lys Met Leu Tyr Ala		
145	150	155 160
Glu Phe Gln Arg Val Lys Ala Gln Thr Arg Leu Gly Thr Arg Leu Asp		
	165	170 175
Leu Asp Thr Ala His Ile Phe Cys Gln Trp Gln Ser Cys Leu Gln Met		
	180	185 190
Gly Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu Pro Glu Pro Asp		
	195	200 205
Leu Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly Leu Cys Gln Gln		
	210	215 220
Leu Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser Ile Cys Pro Glu		
	225	230 235 240
Ala Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala Thr Arg Ser Tyr Ala		
	245	250 255
Pro Ala Glu Ile Phe Leu Pro Lys Gly Arg Ser Asn Ser Lys Lys Lys		
	260	265 270
Lys Ala Glu Glu Thr Glu Tyr Gln Leu Phe		
	275	280

<210> 4

<211> 139

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 4

Met Gly His Pro Arg Ala Ile Gln Pro Ser Val Phe Phe Ser Pro Tyr		
1	5	10 15
Asp Val His Phe Leu Leu Tyr Pro Ile Arg Cys Pro Tyr Leu Lys Ile		
	20	25 30
Gly Arg Phe His Ile Lys Leu Lys Gly Leu His Phe Leu Phe Ser Phe		
	35	40 45
Leu Phe Phe Phe Phe Glu Thr Gln Ser His Ser Val Thr Arg Leu Glu		
	50	55 60
Cys Ser Gly Thr Ile Ser Ala His Cys Asn Leu Cys Leu Pro Gly Ser		
	65	70 75 80

Ser Asn Ser Pro Ala Ser Ala Ser Arg Val Ala Gly Thr Ala Gly Thr
85 90 95

Cys Arg Arg Ala Gln Leu Ile Phe Val Phe Leu Ala Glu Met Gly Phe
100 105 110

His His Val Gly Arg Asp Gly Leu Asp Leu Asn Leu Val Ile His Pro
115 120 125

Pro Arg Ser Pro Lys Ala Leu Gly Leu Gln Ala
130 135

<210> 5

<211> 101

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 5

Met Gly His Pro Arg Ala Ile Gln Pro Ser Val Phe Phe Ser Pro Tyr
1 5 10 15

Asp Val His Phe Leu Leu Tyr Pro Ile Arg Cys Pro Tyr Leu Lys Ile
20 25 30

Gly Arg Phe His Ile Lys Leu Lys Gly Leu His Phe Leu Phe Ser Phe
35 40 45

Leu Phe Phe Phe Leu Arg His Ser Leu Thr Leu Ser Pro Gly Trp Ser
50 55 60

Ala Val Ala Arg Ser Arg Leu Thr Ala Thr Ser Ala Ser Gln Val Gln
65 70 75 80

Val Ile Leu Leu Pro Gln Pro Pro Glu Trp Leu Gly Leu Gln Ala Arg
85 90 95

Ala Ala Ala Pro Ser
100

<210> 6

<211> 53

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 6

Met Gly His Pro Arg Ala Ile Gln Pro Ser Val Phe Phe Ser Pro Tyr
1 5 10 15
Asp Val His Phe Leu Leu Tyr Pro Ile Arg Cys Pro Tyr Leu Lys Ile
20 25 30
Gly Arg Phe His Ile Lys Leu Lys Gly Leu His Phe Leu Phe Ser Phe
35 40 45
Leu Phe Phe Phe Phe
50

<210> 7

<211> 209

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 7

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
1 5 10 15
Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
20 25 30
Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45
Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60
Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80
Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95
Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110
Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125
Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140
Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145 150 155 160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Thr
165 170 175

Ala Leu Leu Trp Gly Leu Lys Lys Lys Lys Glu Asn Asn Arg Arg Thr
180 185 190

His His Met Gln Leu Met Ile Ser Leu Phe Lys Ser Pro Leu Leu Leu
195 200 205

Leu

<210> 8

<211> 196

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 8

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
1 5 10 15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145 150 155 160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Thr
165 170 175

Ala Leu Leu Trp Gly Leu Lys Lys Lys Arg Lys Thr Thr Glu Glu His
180 185 190

Ile Ile Cys Asn
195

<210> 9

<211> 202

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 9

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
1 5 10 15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
20 25 30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
35 40 45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
50 55 60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65 70 75 80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
85 90 95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
100 105 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
115 120 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
130 135 140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145 150 155 160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Thr
165 170 175

Ala Leu Leu Trp Gly Leu Lys Lys Lys Lys Gly Lys Gln Gln Lys Asn

180

185

190

Thr Ser Tyr Ala Thr Asn Asp Leu Ile Ile
195 200

<210> 10

<211> 567

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 10

Met Gly Arg Gly Leu Leu Arg Gly Leu Trp Pro Leu His Ile Val Leu
1 5 10 15

Trp Thr Arg Ile Ala Ser Thr Ile Pro Pro His Val Gln Lys Ser Val
20 25 30

Asn Asn Asp Met Ile Val Thr Asp Asn Asn Gly Ala Val Lys Phe Pro
35 40 45

Gln Leu Cys Lys Phe Cys Asp Val Arg Phe Ser Thr Cys Asp Asn Gln
50 55 60

Lys Ser Cys Met Ser Asn Cys Ser Ile Thr Ser Ile Cys Glu Lys Pro
65 70 75 80

Gln Glu Val Cys Val Ala Val Trp Arg Lys Asn Asp Glu Asn Ile Thr
85 90 95

Leu Glu Thr Val Cys His Asp Pro Lys Leu Pro Tyr His Asp Phe Ile
100 105 110

Leu Glu Asp Ala Ala Ser Pro Lys Cys Ile Met Lys Glu Lys Lys Lys
115 120 125

Pro Gly Glu Thr Phe Phe Met Cys Ser Cys Ser Ser Asp Glu Cys Asn
130 135 140

Asp Asn Ile Ile Phe Ser Glu Glu Tyr Asn Thr Ser Asn Pro Asp Leu
145 150 155 160

Leu Leu Val Ile Phe Gln Val Thr Gly Ile Ser Leu Leu Pro Pro Leu
165 170 175

Gly Val Ala Ile Ser Val Ile Ile Ile Phe Tyr Cys Tyr Arg Val Asn
180 185 190

Arg Gln Gln Lys Leu Ser Ser Thr Trp Glu Thr Gly Lys Thr Arg Lys
195 200 205

Leu	Met	Glu	Phe	Ser	Glu	His	Cys	Ala	Ile	Ile	Leu	Glu	Asp	Asp	Arg	210	215	220	
Ser	Asp	Ile	Ser	Ser	Thr	Cys	Ala	Asn	Asn	Ile	Asn	His	Asn	Thr	Glu	225	230	235	240
Leu	Leu	Pro	Ile	Glu	Leu	Asp	Thr	Leu	Val	Gly	Lys	Gly	Arg	Phe	Ala	245	250	255	
Glu	Val	Tyr	Lys	Ala	Lys	Leu	Lys	Gln	Asn	Thr	Ser	Glu	Gln	Phe	Glu	260	265	270	
Thr	Val	Ala	Val	Lys	Ile	Phe	Pro	Tyr	Glu	Glu	Tyr	Ala	Ser	Trp	Lys	275	280	285	
Thr	Glu	Lys	Asp	Ile	Phe	Ser	Asp	Ile	Asn	Leu	Lys	His	Glu	Asn	Ile	290	295	300	
Leu	Gln	Phe	Leu	Thr	Ala	Glu	Glu	Arg	Lys	Thr	Glu	Leu	Gly	Lys	Gln	305	310	315	320
Tyr	Trp	Leu	Ile	Thr	Ala	Phe	His	Ala	Lys	Gly	Asn	Leu	Gln	Glu	Tyr	325	330	335	
Leu	Thr	Arg	His	Val	Ile	Ser	Trp	Glu	Asp	Leu	Arg	Lys	Leu	Gly	Ser	340	345	350	
Ser	Leu	Ala	Arg	Gly	Ile	Ala	His	Leu	His	Ser	Asp	His	Thr	Pro	Cys	355	360	365	
Gly	Arg	Pro	Lys	Met	Pro	Ile	Val	His	Arg	Asp	Leu	Asn	Ser	Ser	Asn	370	375	380	
Ile	Leu	Val	Lys	Asn	Asp	Leu	Thr	Cys	Cys	Leu	Cys	Asp	Phe	Gly	Leu	385	390	395	400
Ser	Leu	Arg	Leu	Asp	Pro	Thr	Leu	Ser	Val	Asp	Asp	Leu	Ala	Asn	Ser	405	410	415	
Gly	Gln	Val	Gly	Thr	Ala	Arg	Tyr	Met	Ala	Pro	Glu	Val	Leu	Glu	Ser	420	425	430	
Arg	Met	Asn	Leu	Glu	Asn	Ala	Glu	Ser	Phe	Lys	Gln	Thr	Asp	Val	Tyr	435	440	445	
Ser	Met	Ala	Leu	Val	Leu	Trp	Glu	Met	Thr	Ser	Arg	Cys	Asn	Ala	Val	450	455	460	
Gly	Glu	Val	Lys	Asp	Tyr	Glu	Pro	Pro	Phe	Gly	Ser	Lys	Val	Arg	Glu	465	470	475	480
His	Pro	Cys	Val	Glu	Ser	Met	Lys	Asp	Asn	Val	Leu	Arg	Asp	Arg	Gly				

485

490

495

Arg Pro Glu Ile Pro Ser Phe Trp Leu Asn His Gln Gly Ile Gln Met
500 505 510

Val Cys Glu Thr Leu Thr Glu Cys Trp Asp His Asp Pro Glu Ala Arg
515 520 525

Leu Thr Ala Gln Cys Val Ala Glu Arg Phe Ser Glu Leu Glu His Leu
530 535 540

Asp Arg Leu Ser Gly Arg Ser Cys Ser Glu Glu Lys Ile Pro Glu Asp
545 550 555 560

Gly Ser Leu Asn Thr Thr Lys
565

<210> 11

<211> 161

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 11

Met Gly Arg Gly Leu Leu Arg Gly Leu Trp Pro Leu His Ile Val Leu
1 5 10 15

Trp Thr Arg Ile Ala Ser Thr Ile Pro Pro His Val Gln Lys Ser Val
20 25 30

Asn Asn Asp Met Ile Val Thr Asp Asn Asn Gly Ala Val Lys Phe Pro
35 40 45

Gln Leu Cys Lys Phe Cys Asp Val Arg Phe Ser Thr Cys Asp Asn Gln
50 55 60

Lys Ser Cys Met Ser Asn Cys Ser Ile Thr Ser Ile Cys Glu Lys Pro
65 70 75 80

Gln Glu Val Cys Val Ala Val Trp Arg Lys Asn Asp Glu Asn Ile Thr
85 90 95

Leu Glu Thr Val Cys His Asp Pro Lys Leu Pro Tyr His Asp Phe Ile
100 105 110

Leu Glu Asp Ala Ala Ser Pro Lys Cys Ile Met Lys Glu Lys Lys Ser
115 120 125

Leu Val Arg Leu Ser Ser Cys Val Pro Val Ala Leu Met Ser Ala Met
130 135 140

Thr Thr Ser Ser Ser Gln Lys Asn Ile Thr Pro Ala Ile Leu Thr Cys
145 150 155 160

Cys

<210> 12

<211> 130

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 12

Met Gly Arg Gly Leu Leu Arg Gly Leu Trp Pro Leu His Ile Val Leu
1 5 10 15

Trp Thr Arg Ile Ala Ser Thr Ile Pro Pro His Val Gln Lys Ser Val
20 25 30

Asn Asn Asp Met Ile Val Thr Asp Asn Asn Gly Ala Val Lys Phe Pro
35 40 45

Gln Leu Cys Lys Phe Cys Asp Val Arg Phe Ser Thr Cys Asp Asn Gln
50 55 60

Lys Ser Cys Met Ser Asn Cys Ser Ile Thr Ser Ile Cys Glu Lys Pro
65 70 75 80

Gln Glu Val Cys Val Ala Val Trp Arg Lys Asn Asp Glu Asn Ile Thr
85 90 95

Leu Glu Thr Val Cys His Asp Pro Lys Leu Pro Tyr His Asp Phe Ile
100 105 110

Leu Glu Asp Ala Ala Ser Pro Lys Cys Ile Met Lys Glu Lys Lys Lys
115 120 125

Ala Trp
130

<210> 13

<211> 332

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 13

Met Gly Ala Gln Phe Ser Lys Thr Ala Ala Lys Gly Glu Ala Ala Ala
1 5 10 15

Glu Arg Pro Gly Glu Ala Ala Val Ala Ser Ser Pro Ser Lys Ala Asn
20 25 30

Gly Gln Glu Asn Gly His Val Lys Val Asn Gly Asp Ala Ser Pro Ala
35 40 45

Ala Ala Glu Ser Gly Ala Lys Glu Glu Leu Gln Ala Asn Gly Ser Ala
50 55 60

Pro Ala Ala Asp Lys Glu Glu Pro Ala Ala Ala Gly Ser Gly Ala Ala
65 70 75 80

Ser Pro Ser Ser Ala Glu Lys Gly Glu Pro Ala Ala Ala Ala Ala Pro
85 90 95

Glu Ala Gly Ala Ser Pro Val Glu Lys Glu Ala Pro Ala Glu Gly Glu
100 105 110

Ala Ala Glu Pro Gly Ser Ala Thr Ala Ala Glu Gly Glu Ala Ala Ser
115 120 125

Ala Ala Ser Ser Thr Ser Ser Pro Lys Ala Glu Asp Gly Ala Thr Pro
130 135 140

Ser Pro Ser Asn Glu Thr Pro Lys Lys Lys Lys Lys Arg Phe Ser Phe
145 150 155 160

Lys Lys Ser Phe Lys Leu Ser Gly Phe Ser Phe Lys Lys Asn Lys Lys
165 170 175

Glu Ala Gly Glu Gly Gly Glu Ala Glu Ala Pro Ala Ala Glu Gly Gly
180 185 190

Lys Asp Glu Ala Ala Gly Gly Ala Ala Ala Ala Ala Glu Ala Gly
195 200 205

Ala Ala Ser Gly Glu Gln Ala Ala Ala Pro Gly Glu Glu Ala Ala Ala
210 215 220

Gly Glu Glu Gly Ala Ala Gly Gly Asp Pro Gln Glu Ala Lys Pro Gln
225 230 235 240

Glu Ala Ala Val Ala Pro Glu Lys Pro Pro Ala Ser Asp Glu Thr Lys
245 250 255

Ala Ala Glu Glu Pro Ser Lys Val Glu Glu Lys Lys Ala Glu Glu Ala
260 265 270

Gly Ala Ser Ala Ala Ala Cys Glu Ala Pro Ser Ala Ala Gly Pro Gly

<210> 15
 <211> 182
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 15
 Met Gly Ala Gln Phe Ser Lys Thr Ala Ala Lys Gly Glu Ala Ala Ala
 1 5 10 15
 Glu Arg Pro Gly Glu Ala Ala Val Ala Ser Ser Pro Ser Lys Ala Asn
 20 25 30
 Gly Gln Glu Asn Gly His Val Lys Val Asn Gly Asp Ala Ser Pro Ala
 35 40 45
 Ala Ala Glu Ser Gly Ala Lys Glu Glu Leu Gln Ala Asn Gly Ser Ala
 50 55 60
 Pro Ala Ala Asp Lys Glu Glu Pro Ala Ala Ala Gly Ser Gly Ala Ala
 65 70 75 80
 Ser Pro Ser Ser Ala Glu Lys Gly Glu Pro Ala Ala Ala Ala Ala Pro
 85 90 95
 Glu Ala Gly Ala Ser Pro Val Glu Lys Glu Ala Pro Ala Glu Gly Glu
 100 105 110
 Ala Ala Glu Pro Gly Ser Ala Thr Ala Ala Glu Gly Glu Ala Ala Ser
 115 120 125
 Ala Ala Ser Ser Thr Ser Ser Pro Lys Ala Glu Asp Gly Ala Thr Pro
 130 135 140
 Ser Pro Ser Asn Glu Thr Pro Lys Lys Lys Lys Glu Ala Leu Phe Leu
 145 150 155 160
 Gln Glu Val Phe Gln Ala Glu Arg Leu Leu Leu Gln Glu Glu Gln Glu
 165 170 175
 Gly Gly Trp Arg Arg Arg
 180

<210> 16
 <211> 596
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 16

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Glu	Leu	Ile	Ser	Phe	Lys	Asp	Glu	Gly	Glu	Gln	Glu	Glu	Lys	Ser	Ser
			20					25					30		
Glu	Asn	Ser	Ser	Ala	Glu	Arg	Asp	Leu	Ala	Asp	Val	Lys	Ser	Ser	Leu
			35					40				45			
Val	Asn	Glu	Ser	Glu	Thr	Asn	Gln	Asn	Ser	Ser	Ser	Asp	Ser	Glu	Ala
			50				55					60			
Glu	Arg	Arg	Pro	Pro	Pro	Arg	Ser	Glu	Ser	Phe	Arg	Asp	Lys	Ser	Arg
65						70				75					80
Glu	Ser	Leu	Glu	Glu	Ala	Ala	Lys	Arg	Gln	Asp	Gly	Gly	Leu	Phe	Lys
				85					90					95	
Gly	Pro	Pro	Tyr	Pro	Gly	Tyr	Pro	Phe	Ile	Met	Ile	Pro	Asp	Leu	Thr
			100					105					110		
Ser	Pro	Tyr	Leu	Pro	Asn	Gly	Ser	Leu	Ser	Pro	Thr	Ala	Arg	Thr	Tyr
		115					120					125			
Leu	Gln	Met	Lys	Trp	Pro	Leu	Leu	Asp	Val	Gln	Ala	Gly	Ser	Leu	Gln
		130				135					140				
Ser	Arg	Gln	Ala	Leu	Lys	Asp	Ala	Arg	Ser	Pro	Ser	Pro	Ala	His	Ile
145					150					155				160	
Val	Ser	Asn	Lys	Val	Pro	Val	Val	Gln	His	Pro	His	His	Val	His	Pro
			165					170					175		
Leu	Thr	Pro	Leu	Ile	Thr	Tyr	Ser	Asn	Glu	His	Phe	Thr	Pro	Gly	Asn
			180					185					190		
Pro	Pro	Pro	His	Leu	Pro	Ala	Asp	Val	Asp	Pro	Lys	Thr	Gly	Ile	Pro
			195				200					205			
Arg	Pro	Pro	His	Pro	Pro	Asp	Ile	Ser	Pro	Tyr	Tyr	Pro	Leu	Ser	Pro
		210				215					220				
Gly	Thr	Val	Gly	Gln	Ile	Pro	His	Pro	Leu	Gly	Trp	Leu	Val	Pro	Gln
225				230					235					240	
Gln	Gly	Gln	Pro	Val	Tyr	Pro	Ile	Thr	Thr	Gly	Gly	Phe	Arg	His	Pro
			245					250					255		

Tyr	Pro	Thr	Ala	Leu	Thr	Val	Asn	Ala	Ser	Val	Ser	Arg	Phe	Pro	Pro		
			260					265					270				
His	Met	Val	Pro	Pro	His	His	Thr	Leu	His	Thr	Thr	Gly	Ile	Pro	His		
		275					280					285					
Pro	Ala	Ile	Val	Thr	Pro	Thr	Val	Lys	Gln	Glu	Ser	Ser	Gln	Ser	Asp		
	290					295					300						
Val	Gly	Ser	Leu	His	Ser	Ser	Lys	His	Gln	Asp	Ser	Lys	Lys	Glu	Glu		
305					310					315					320		
Glu	Lys	Lys	Lys	Pro	His	Ile	Lys	Lys	Pro	Leu	Asn	Ala	Phe	Met	Leu		
				325					330					335			
Tyr	Met	Lys	Glu	Met	Arg	Ala	Lys	Val	Val	Ala	Glu	Cys	Thr	Leu	Lys		
		340					345						350				
Glu	Ser	Ala	Ala	Ile	Asn	Gln	Ile	Leu	Gly	Arg	Arg	Trp	His	Ala	Leu		
	355						360					365					
Ser	Arg	Glu	Glu	Gln	Ala	Lys	Tyr	Tyr	Glu	Leu	Ala	Arg	Lys	Glu	Arg		
	370					375					380						
Gln	Leu	His	Met	Gln	Leu	Tyr	Pro	Gly	Trp	Ser	Ala	Arg	Asp	Asn	Tyr		
385					390					395					400		
Gly	Lys	Lys	Lys	Lys	Arg	Lys	Arg	Asp	Lys	Gln	Pro	Gly	Glu	Thr	Asn		
				405					410					415			
Glu	His	Ser	Glu	Cys	Phe	Leu	Asn	Pro	Cys	Leu	Ser	Leu	Pro	Pro	Ile		
		420					425					430					
Thr	Asp	Leu	Ser	Ala	Pro	Lys	Lys	Cys	Arg	Ala	Arg	Phe	Gly	Leu	Asp		
	435					440						445					
Gln	Gln	Asn	Asn	Trp	Cys	Gly	Pro	Cys	Arg	Arg	Lys	Lys	Lys	Cys	Val		
	450					455					460						
Arg	Tyr	Ile	Gln	Gly	Glu	Gly	Ser	Cys	Leu	Ser	Pro	Pro	Ser	Ser	Asp		
465					470					475					480		
Gly	Ser	Leu	Leu	Asp	Ser	Pro	Pro	Pro	Ser	Pro	Asn	Leu	Leu	Gly	Ser		
				485					490					495			
Pro	Pro	Arg	Asp	Ala	Lys	Ser	Gln	Thr	Glu	Gln	Thr	Gln	Pro	Leu	Ser		
			500					505					510				
Leu	Ser	Leu	Lys	Pro	Asp	Pro	Leu	Ala	His	Leu	Ser	Met	Met	Pro	Pro		
	515						520					525					
Pro	Pro	Ala	Leu	Leu	Leu	Ala	Glu	Ala	Thr	His	Lys	Ala	Ser	Ala	Leu		
	530					535					540						

Cys Pro Asn Gly Ala Leu Asp Leu Pro Pro Ala Ala Leu Gln Pro Ala
545 550 555 560

Ala Pro Ser Ser Ser Ile Ala Gln Pro Ser Thr Ser Trp Leu His Ser
565 570 575

His Ser Ser Leu Ala Gly Thr Gln Pro Gln Pro Leu Ser Leu Val Thr
580 585 590

Lys Ser Leu Glu
595

<210> 17

<211> 483

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 17

Met Pro Gln Leu Asn Gly Gly Gly Gly Asp Asp Leu Gly Ala Asn Asp
1 5 10 15

Glu Leu Ile Ser Phe Lys Asp Glu Gly Glu Gln Glu Glu Lys Ser Ser
20 25 30

Glu Asn Ser Ser Ala Glu Arg Asp Leu Ala Asp Val Lys Ser Ser Leu
35 40 45

Val Asn Glu Ser Glu Thr Asn Gln Asn Ser Ser Ser Asp Ser Glu Ala
50 55 60

Glu Arg Arg Pro Pro Pro Arg Ser Glu Ser Phe Arg Asp Lys Ser Arg
65 70 75 80

Glu Ser Leu Glu Glu Ala Ala Lys Arg Gln Asp Gly Gly Leu Phe Lys
85 90 95

Gly Pro Pro Tyr Pro Gly Tyr Pro Phe Ile Met Ile Pro Asp Leu Thr
100 105 110

Ser Pro Tyr Leu Pro Asn Gly Ser Leu Ser Pro Thr Ala Arg Thr Tyr
115 120 125

Leu Gln Met Lys Trp Pro Leu Leu Asp Val Gln Ala Gly Ser Leu Gln
130 135 140

Ser Arg Gln Ala Leu Lys Asp Ala Arg Ser Pro Ser Pro Ala His Ile
145 150 155 160

Val	Ser	Asn	Lys	Val	Pro	Val	Val	Gln	His	Pro	His	His	Val	His	Pro	
				165					170					175		
Leu	Thr	Pro	Leu	Ile	Thr	Tyr	Ser	Asn	Glu	His	Phe	Thr	Pro	Gly	Asn	
			180					185					190			
Pro	Pro	Pro	His	Leu	Pro	Ala	Asp	Val	Asp	Pro	Lys	Thr	Gly	Ile	Pro	
		195					200					205				
Arg	Pro	Pro	His	Pro	Pro	Asp	Ile	Ser	Pro	Tyr	Tyr	Pro	Leu	Ser	Pro	
	210					215					220					
Gly	Thr	Val	Gly	Gln	Ile	Pro	His	Pro	Leu	Gly	Trp	Leu	Val	Pro	Gln	
225					230					235					240	
Gln	Gly	Gln	Pro	Val	Tyr	Pro	Ile	Thr	Thr	Gly	Gly	Phe	Arg	His	Pro	
				245					250					255		
Tyr	Pro	Thr	Ala	Leu	Thr	Val	Asn	Ala	Ser	Val	Ser	Arg	Phe	Pro	Pro	
			260					265					270			
His	Met	Val	Pro	Pro	His	His	Thr	Leu	His	Thr	Thr	Gly	Ile	Pro	His	
		275					280					285				
Pro	Ala	Ile	Val	Thr	Pro	Thr	Val	Lys	Gln	Glu	Ser	Ser	Gln	Ser	Asp	
	290					295					300					
Val	Gly	Ser	Leu	His	Ser	Ser	Lys	His	Gln	Asp	Ser	Lys	Lys	Glu	Glu	
305					310					315					320	
Glu	Lys	Lys	Lys	Pro	His	Ile	Lys	Lys	Pro	Leu	Asn	Ala	Phe	Met	Leu	
				325					330					335		
Tyr	Met	Lys	Glu	Met	Arg	Ala	Lys	Val	Val	Ala	Glu	Cys	Thr	Leu	Lys	
			340					345					350			
Glu	Ser	Ala	Ala	Ile	Asn	Gln	Ile	Leu	Gly	Arg	Arg	Trp	His	Ala	Leu	
		355					360					365				
Ser	Arg	Glu	Glu	Gln	Ala	Lys	Tyr	Tyr	Glu	Leu	Ala	Arg	Lys	Glu	Arg	
	370					375					380					
Gln	Leu	His	Met	Gln	Leu	Tyr	Pro	Gly	Trp	Ser	Ala	Arg	Asp	Asn	Tyr	
385					390					395					400	
Gly	Lys	Lys	Lys	Lys	Arg	Lys	Arg	Asp	Lys	Gln	Pro	Gly	Glu	Thr	Asn	
				405					410					415		
Glu	His	Ser	Glu	Cys	Phe	Leu	Asn	Pro	Cys	Leu	Ser	Leu	Pro	Pro	Ile	
			420					425					430			
Thr	Asp	Leu	Ser	Ala	Pro	Lys	Lys	Cys	Arg	Ala	Arg	Phe	Gly	Leu	Asp	
		435					440						445			

Gln Gln Asn Asn Trp Cys Gly Pro Cys Arg Arg Lys Lys Ser Ala Phe
450 455 460

Ala Thr Tyr Lys Val Lys Ala Ala Ala Ser Ala His Pro Leu Gln Met
465 470 475 480

Glu Ala Tyr

<210> 18

<211> 469

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 18

Met Pro Gln Leu Asn Gly Gly Gly Gly Asp Asp Leu Gly Ala Asn Asp
1 5 10 15

Glu Leu Ile Ser Phe Lys Asp Glu Gly Glu Gln Glu Glu Lys Ser Ser
20 25 30

Glu Asn Ser Ser Ala Glu Arg Asp Leu Ala Asp Val Lys Ser Ser Leu
35 40 45

Val Asn Glu Ser Glu Thr Asn Gln Asn Ser Ser Ser Asp Ser Glu Ala
50 55 60

Glu Arg Arg Pro Pro Pro Arg Ser Glu Ser Phe Arg Asp Lys Ser Arg
65 70 75 80

Glu Ser Leu Glu Glu Ala Ala Lys Arg Gln Asp Gly Gly Leu Phe Lys
85 90 95

Gly Pro Pro Tyr Pro Gly Tyr Pro Phe Ile Met Ile Pro Asp Leu Thr
100 105 110

Ser Pro Tyr Leu Pro Asn Gly Ser Leu Ser Pro Thr Ala Arg Thr Tyr
115 120 125

Leu Gln Met Lys Trp Pro Leu Leu Asp Val Gln Ala Gly Ser Leu Gln
130 135 140

Ser Arg Gln Ala Leu Lys Asp Ala Arg Ser Pro Ser Pro Ala His Ile
145 150 155 160

Val Ser Asn Lys Val Pro Val Val Gln His Pro His His Val His Pro
165 170 175

Leu Thr Pro Leu Ile Thr Tyr Ser Asn Glu His Phe Thr Pro Gly Asn

180										185					190						
Pro	Pro	Pro	His	Leu	Pro	Ala	Asp	Val	Asp	Pro	Lys	Thr	Gly	Ile	Pro						
		195					200					205									
Arg	Pro	Pro	His	Pro	Pro	Asp	Ile	Ser	Pro	Tyr	Tyr	Pro	Leu	Ser	Pro						
	210					215					220										
Gly	Thr	Val	Gly	Gln	Ile	Pro	His	Pro	Leu	Gly	Trp	Leu	Val	Pro	Gln						
225					230					235					240						
Gln	Gly	Gln	Pro	Val	Tyr	Pro	Ile	Thr	Thr	Gly	Gly	Phe	Arg	His	Pro						
				245					250					255							
Tyr	Pro	Thr	Ala	Leu	Thr	Val	Asn	Ala	Ser	Val	Ser	Arg	Phe	Pro	Pro						
			260					265					270								
His	Met	Val	Pro	Pro	His	His	Thr	Leu	His	Thr	Thr	Gly	Ile	Pro	His						
		275					280					285									
Pro	Ala	Ile	Val	Thr	Pro	Thr	Val	Lys	Gln	Glu	Ser	Ser	Gln	Ser	Asp						
	290					295					300										
Val	Gly	Ser	Leu	His	Ser	Ser	Lys	His	Gln	Asp	Ser	Lys	Lys	Glu	Glu						
305					310					315					320						
Glu	Lys	Lys	Lys	Pro	His	Ile	Lys	Lys	Pro	Leu	Asn	Ala	Phe	Met	Leu						
				325					330					335							
Tyr	Met	Lys	Glu	Met	Arg	Ala	Lys	Val	Val	Ala	Glu	Cys	Thr	Leu	Lys						
			340					345					350								
Glu	Ser	Ala	Ala	Ile	Asn	Gln	Ile	Leu	Gly	Arg	Arg	Trp	His	Ala	Leu						
		355					360					365									
Ser	Arg	Glu	Glu	Gln	Ala	Lys	Tyr	Tyr	Glu	Leu	Ala	Arg	Lys	Glu	Arg						
	370					375					380										
Gln	Leu	His	Met	Gln	Leu	Tyr	Pro	Gly	Trp	Ser	Ala	Arg	Asp	Asn	Tyr						
385					390					395					400						
Gly	Lys	Lys	Lys	Lys	Arg	Lys	Arg	Asp	Lys	Gln	Pro	Gly	Glu	Thr	Asn						
				405					410					415							
Glu	His	Ser	Glu	Cys	Phe	Leu	Asn	Pro	Cys	Leu	Ser	Leu	Pro	Pro	Ile						
			420					425					430								
Thr	Asp	Leu	Ser	Ala	Pro	Lys	Lys	Cys	Arg	Ala	Arg	Phe	Gly	Leu	Asp						
		435						440				445									
Gln	Gln	Asn	Asn	Trp	Cys	Gly	Pro	Cys	Arg	Arg	Lys	Lys	Lys	Val	Arg						
	450					455					460										
Ser	Leu	His	Thr	Arg																	

465

<210> 19

<211> 556

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 19

Ile Pro Ala Phe Pro Ala Gly Thr Val Leu Gln Pro Phe Pro Glu Ala
1 5 10 15

Ala Leu Ala Thr Arg Val Thr Val Pro Ala Val Glu Ala Pro Ala Ala
20 25 30

Pro Arg Leu Asp Leu Glu Glu Ser Glu Glu Phe Lys Glu Arg Cys Thr
35 40 45

Gln Cys Ala Ala Val Ser Trp Gly Leu Thr Asp Glu Gly Lys Tyr Tyr
50 55 60

Cys Thr Ser Cys His Asn Val Thr Glu Arg Tyr Gln Glu Val Thr Asn
65 70 75 80

Thr Asp Leu Ile Pro Asn Thr Gln Ile Lys Ala Leu Asn Arg Gly Leu
85 90 95

Lys Lys Lys Asn Asn Thr Glu Lys Gly Trp Asp Trp Tyr Val Cys Glu
100 105 110

Gly Phe Gln Tyr Ile Leu Tyr Gln Gln Ala Glu Ala Leu Lys Asn Leu
115 120 125

Gly Val Gly Pro Glu Leu Lys Asn Asp Val Leu His Asn Phe Trp Lys
130 135 140

Arg Tyr Leu Gln Lys Ser Lys Gln Ala Tyr Cys Lys Asn Pro Val Tyr
145 150 155 160

Thr Thr Gly Arg Lys Pro Thr Val Leu Glu Asp Asn Leu Ser His Ser
165 170 175

Asp Trp Ala Ser Glu Pro Glu Leu Leu Ser Asp Val Ser Cys Pro Pro
180 185 190

Phe Leu Glu Ser Gly Ala Glu Ser Gln Ser Asp Ile His Thr Arg Lys
195 200 205

Pro Phe Pro Val Ser Lys Ala Ser Gln Ser Glu Thr Ser Val Cys Ser
210 215 220

Gly	Ser	Leu	Asp	Gly	Val	Glu	Tyr	Ser	Gln	Arg	Lys	Glu	Lys	Gly	Ile	
225					230					235					240	
Val	Lys	Met	Thr	Met	Pro	Gln	Thr	Leu	Ala	Phe	Cys	Tyr	Leu	Ser	Leu	
				245					250					255		
Leu	Trp	Gln	Arg	Glu	Ala	Ile	Thr	Leu	Ser	Asp	Leu	Leu	Arg	Phe	Val	
			260					265					270			
Glu	Glu	Asp	His	Ile	Pro	Tyr	Ile	Asn	Ala	Phe	Gln	His	Phe	Pro	Glu	
		275					280					285				
Gln	Met	Lys	Leu	Tyr	Gly	Arg	Asp	Arg	Gly	Ile	Phe	Gly	Ile	Glu	Ser	
	290					295					300					
Trp	Pro	Asp	Tyr	Glu	Asp	Ile	Tyr	Lys	Lys	Thr	Ile	Glu	Val	Gly	Thr	
305					310					315					320	
Phe	Leu	Asp	Leu	Pro	Arg	Phe	Pro	Asp	Ile	Thr	Glu	Asp	Cys	Tyr	Leu	
				325				330						335		
His	Pro	Asn	Ile	Leu	Cys	Met	Lys	Tyr	Leu	Met	Glu	Val	Asn	Leu	Pro	
		340						345					350			
Asp	Glu	Met	His	Ser	Leu	Thr	Cys	His	Val	Val	Lys	Met	Thr	Gly	Met	
		355					360					365				
Gly	Glu	Val	Asp	Phe	Leu	Thr	Phe	Asp	Pro	Ile	Ala	Lys	Met	Ala	Lys	
	370					375					380					
Ala	Val	Lys	Tyr	Asp	Val	Gln	Ala	Val	Ala	Ile	Ile	Val	Val	Val	Leu	
385					390					395					400	
Lys	Leu	Leu	Phe	Leu	Met	Asp	Asp	Ser	Phe	Glu	Trp	Ser	Leu	Ser	Asn	
			405					410						415		
Leu	Ala	Glu	Lys	His	Asn	Glu	Lys	Asn	Lys	Lys	Asp	Lys	Pro	Trp	Phe	
			420					425					430			
Asp	Phe	Arg	Lys	Trp	Tyr	Gln	Ile	Met	Lys	Lys	Ala	Phe	Asp	Glu	Lys	
		435				440						445				
Lys	Gln	Lys	Trp	Glu	Glu	Ala	Arg	Ala	Lys	Tyr	Leu	Trp	Lys	Ser	Glu	
	450					455					460					
Lys	Pro	Leu	Tyr	Tyr	Ser	Phe	Val	Asp	Lys	Pro	Val	Ala	Tyr	Lys	Lys	
465					470					475					480	
Arg	Glu	Met	Val	Val	Asn	Leu	Gln	Lys	Gln	Phe	Ser	Thr	Leu	Val	Asp	
			485					490						495		
Ser	Thr	Ala	Thr	Ala	Gly	Lys	Lys	Ser	Pro	Ser	Ser	Phe	Gln	Phe	Asn	
			500					505					510			

Trp Thr Glu Glu Asp Thr Asp Arg Thr Cys Phe His Gly His Ser Leu
515 520 525

Gln Gly Val Leu Lys Glu Lys Gly Gln Ser Leu Leu Thr Lys Asn Ser
530 535 540

Leu Tyr Trp Leu Ser Thr Gln Lys Phe Cys Arg Trp
545 550 555

<210> 20
<211> 124
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 20
Ile Pro Ala Phe Pro Ala Gly Thr Val Leu Gln Pro Phe Pro Glu Ala
1 5 10 15
Ala Leu Ala Thr Arg Val Thr Val Pro Ala Val Glu Ala Pro Ala Ala
20 25 30
Pro Arg Leu Asp Leu Glu Glu Ser Glu Glu Phe Lys Glu Arg Cys Thr
35 40 45
Gln Cys Ala Ala Val Ser Trp Gly Leu Thr Asp Glu Gly Lys Tyr Tyr
50 55 60
Cys Thr Ser Cys His Asn Val Thr Glu Arg Tyr Gln Glu Val Thr Asn
65 70 75 80
Thr Asp Leu Ile Pro Asn Thr Gln Ile Lys Ala Leu Asn Arg Gly Leu
85 90 95
Lys Lys Lys Thr Ile Leu Lys Lys Ala Gly Ile Gly Met Cys Val Lys
100 105 110
Val Ser Ser Ile Phe Phe Ile Asn Lys Gln Lys Pro
115 120

<210> 21
<211> 102
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides

encoded by genes with coding microsatellites

<400> 21

Ile Pro Ala Phe Pro Ala Gly Thr Val Leu Gln Pro Phe Pro Glu Ala
1 5 10 15

Ala Leu Ala Thr Arg Val Thr Val Pro Ala Val Glu Ala Pro Ala Ala
20 25 30

Pro Arg Leu Asp Leu Glu Glu Ser Glu Glu Phe Lys Glu Arg Cys Thr
35 40 45

Gln Cys Ala Ala Val Ser Trp Gly Leu Thr Asp Glu Gly Lys Tyr Tyr
50 55 60

Cys Thr Ser Cys His Asn Val Thr Glu Arg Tyr Gln Glu Val Thr Asn
65 70 75 80

Thr Asp Leu Ile Pro Asn Thr Gln Ile Lys Ala Leu Asn Arg Gly Leu
85 90 95

Lys Lys Lys Lys Gln Tyr
100

<210> 22

<211> 93

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 22

Met Asp Thr Gln Lys Gln Ile His Lys Thr His Asn Ser Lys Asn Gln
1 5 10 15

Phe Phe Thr Ile Phe Phe Phe Leu Ser Val Glu Phe Gly Lys Glu Gly
20 25 30

Thr Arg Lys Asn Phe Tyr Leu Leu Leu Ser Ile Gly His Tyr Gly Arg
35 40 45

Lys Ser Arg Arg Ala Asp Leu Gly Thr Ala Asp Thr Ala Asp Lys Thr
50 55 60

Glu Pro Glu Cys Phe Ala Ala Ser Trp Thr Phe Asp Pro Asn Pro Ser
65 70 75 80

Val Thr Val Ser Gly Ala His Ser Thr Ala Val His Gln
85 90

<210> 23
<211> 80
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 23
Met Asp Thr Gln Lys Gln Ile His Lys Thr His Asn Ser Lys Asn Gln
1 5 10 15
Phe Phe Thr Ile Phe Phe Ser Cys Gln Leu Asn Leu Gly Arg Lys Glu
20 25 30
His Ala Lys Ile Phe Thr Phe Phe Phe Gln Leu Asp Thr Met Asp Gly
35 40 45
Asn Pro Gly Glu Leu Thr Leu Glu Leu Gln Thr Leu Gln Ile Lys Gln
50 55 60
Ser Gln Asn Ala Leu Leu Pro Ala Gly Pro Leu Thr Gln Thr Pro Val
65 70 75 80

<210> 24
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 24
Met Asp Thr Gln Lys Gln Ile His Lys Thr His Asn Ser Lys Asn Gln
1 5 10 15
Phe Phe Thr Ile Phe Phe Phe Pro Val Ser
20 25

<210> 25
<211> 760
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 25

Met Ala Gly Gln Gln Phe Gln Tyr Asp Asp Ser Gly Asn Thr Phe Phe
1 5 10 15

Tyr Phe Leu Thr Ser Phe Val Gly Leu Ile Val Ile Pro Ala Thr Tyr
20 25 30

Tyr Leu Trp Pro Arg Asp Gln Asn Ala Glu Gln Ile Arg Leu Lys Asn
35 40 45

Ile Arg Lys Val Tyr Gly Arg Cys Met Trp Tyr Arg Leu Arg Leu Leu
50 55 60

Lys Pro Gln Pro Asn Ile Ile Pro Thr Val Lys Lys Ile Val Leu Leu
65 70 75 80

Ala Gly Trp Ala Leu Phe Leu Phe Leu Ala Tyr Lys Val Ser Lys Thr
85 90 95

Asp Arg Glu Tyr Gln Glu Tyr Asn Pro Tyr Glu Val Leu Asn Leu Asp
100 105 110

Pro Gly Ala Thr Val Ala Glu Ile Lys Lys Gln Tyr Arg Leu Leu Ser
115 120 125

Leu Lys Tyr His Pro Asp Lys Gly Gly Asp Glu Val Met Phe Met Arg
130 135 140

Ile Ala Lys Ala Tyr Ala Ala Leu Thr Asp Glu Glu Ser Arg Lys Asn
145 150 155 160

Trp Glu Glu Phe Gly Asn Pro Asp Gly Pro Gln Ala Thr Ser Phe Gly
165 170 175

Ile Ala Leu Pro Ala Trp Ile Val Asp Gln Lys Asn Ser Ile Leu Val
180 185 190

Leu Leu Val Tyr Gly Leu Ala Phe Met Val Ile Leu Pro Val Val Val
195 200 205

Gly Ser Trp Trp Tyr Arg Ser Ile Arg Tyr Ser Gly Asp Gln Ile Leu
210 215 220

Ile Arg Thr Thr Gln Ile Tyr Thr Tyr Phe Val Tyr Lys Thr Arg Asn
225 230 235 240

Met Asp Met Lys Arg Leu Ile Met Val Leu Ala Gly Ala Ser Glu Phe
245 250 255

Asp Pro Gln Tyr Asn Lys Asp Ala Thr Ser Arg Pro Thr Asp Asn Ile
260 265 270

Leu Ile Pro Gln Leu Ile Arg Glu Ile Gly Ser Ile Asn Leu Lys Lys

275					280					285						
Asn	Glu	Pro	Pro	Leu	Thr	Cys	Pro	Tyr	Ser	Leu	Lys	Ala	Arg	Val	Leu	
290					295					300						
Leu	Leu	Ser	His	Leu	Ala	Arg	Met	Lys	Ile	Pro	Glu	Thr	Leu	Glu	Glu	
305					310					315					320	
Asp	Gln	Gln	Phe	Met	Leu	Lys	Lys	Cys	Pro	Ala	Leu	Leu	Gln	Glu	Met	
325					330					335						
Val	Asn	Val	Ile	Cys	Gln	Leu	Ile	Val	Met	Ala	Arg	Asn	Arg	Glu	Glu	
340					345					350						
Arg	Glu	Phe	Arg	Ala	Pro	Thr	Leu	Ala	Ser	Leu	Glu	Asn	Cys	Met	Lys	
355					360					365						
Leu	Ser	Gln	Met	Ala	Val	Gln	Gly	Leu	Gln	Gln	Phe	Lys	Ser	Pro	Leu	
370					375					380						
Leu	Gln	Leu	Pro	His	Ile	Glu	Glu	Asp	Asn	Leu	Arg	Arg	Val	Ser	Asn	
385					390					395					400	
His	Lys	Lys	Tyr	Lys	Ile	Lys	Thr	Ile	Gln	Asp	Leu	Val	Ser	Leu	Lys	
405					410					415						
Glu	Ser	Asp	Arg	His	Thr	Leu	Leu	His	Phe	Leu	Glu	Asp	Glu	Lys	Tyr	
420					425					430						
Glu	Glu	Val	Met	Ala	Val	Leu	Gly	Ser	Phe	Pro	Tyr	Val	Thr	Met	Asp	
435					440					445						
Ile	Lys	Ser	Gln	Val	Leu	Asp	Asp	Glu	Asp	Ser	Asn	Asn	Ile	Thr	Val	
450					455					460						
Gly	Ser	Leu	Val	Thr	Val	Leu	Val	Lys	Leu	Thr	Arg	Gln	Thr	Met	Ala	
465					470					475					480	
Glu	Val	Phe	Glu	Lys	Glu	Gln	Ser	Ile	Cys	Ala	Ala	Glu	Glu	Gln	Pro	
485					490					495						
Ala	Glu	Asp	Gly	Gln	Gly	Glu	Thr	Asn	Lys	Asn	Arg	Thr	Lys	Gly	Gly	
500					505					510						
Trp	Gln	Gln	Lys	Ser	Lys	Gly	Pro	Lys	Lys	Thr	Ala	Lys	Ser	Lys	Lys	
515					520					525						
Lys	Lys	Pro	Leu	Lys	Lys	Lys	Pro	Thr	Pro	Val	Leu	Leu	Pro	Gln	Ser	
530					535					540						
Lys	Gln	Gln	Lys	Gln	Lys	Gln	Ala	Asn	Gly	Val	Val	Gly	Asn	Glu	Ala	
545					550					555					560	
Ala	Val	Lys	Glu	Asp	Glu	Glu	Glu	Val	Ser	Asp	Lys	Gly	Ser	Asp	Ser	

565

570

575

Glu Glu Glu Glu Thr Asn Arg Asp Ser Gln Ser Glu Lys Asp Asp Gly
580 585 590

Ser Asp Arg Asp Ser Asp Arg Glu Gln Asp Glu Lys Gln Asn Lys Asp
595 600 605

Asp Glu Ala Glu Trp Gln Glu Leu Gln Gln Ser Ile Gln Arg Lys Glu
610 615 620

Arg Ala Leu Leu Glu Thr Lys Ser Lys Ile Thr His Pro Val Tyr Ser
625 630 635 640

Leu Tyr Phe Pro Glu Glu Lys Gln Glu Trp Trp Trp Leu Tyr Ile Ala
645 650 655

Asp Arg Lys Glu Gln Thr Leu Ile Ser Met Pro Tyr His Val Cys Thr
660 665 670

Leu Lys Asp Thr Glu Glu Val Glu Leu Lys Phe Pro Ala Pro Gly Lys
675 680 685

Pro Gly Asn Tyr Gln Tyr Thr Val Phe Leu Arg Ser Asp Ser Tyr Met
690 695 700

Gly Leu Asp Gln Ile Lys Pro Leu Lys Leu Glu Val His Glu Ala Lys
705 710 715 720

Pro Val Pro Glu Asn His Pro Gln Trp Asp Thr Ala Ile Glu Gly Asp
725 730 735

Glu Asp Gln Glu Asp Ser Glu Gly Phe Glu Asp Ser Phe Glu Glu Glu
740 745 750

Glu Glu Glu Glu Glu Asp Asp Asp
755 760

<210> 26

<211> 531

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 26

Met Ala Gly Gln Gln Phe Gln Tyr Asp Asp Ser Gly Asn Thr Phe Phe
1 5 10 15

Tyr Phe Leu Thr Ser Phe Val Gly Leu Ile Val Ile Pro Ala Thr Tyr

20					25					30					
Tyr	Leu	Trp	Pro	Arg	Asp	Gln	Asn	Ala	Glu	Gln	Ile	Arg	Leu	Lys	Asn
35			40					45							
Ile	Arg	Lys	Val	Tyr	Gly	Arg	Cys	Met	Trp	Tyr	Arg	Leu	Arg	Leu	Leu
50		55					60								
Lys	Pro	Gln	Pro	Asn	Ile	Ile	Pro	Thr	Val	Lys	Lys	Ile	Val	Leu	Leu
65		70				75			80						
Ala	Gly	Trp	Ala	Leu	Phe	Leu	Phe	Leu	Ala	Tyr	Lys	Val	Ser	Lys	Thr
85				90					95						
Asp	Arg	Glu	Tyr	Gln	Glu	Tyr	Asn	Pro	Tyr	Glu	Val	Leu	Asn	Leu	Asp
100			105					110							
Pro	Gly	Ala	Thr	Val	Ala	Glu	Ile	Lys	Lys	Gln	Tyr	Arg	Leu	Leu	Ser
115		120					125								
Leu	Lys	Tyr	His	Pro	Asp	Lys	Gly	Gly	Asp	Glu	Val	Met	Phe	Met	Arg
130		135					140								
Ile	Ala	Lys	Ala	Tyr	Ala	Ala	Leu	Thr	Asp	Glu	Glu	Ser	Arg	Lys	Asn
145		150				155					160				
Trp	Glu	Glu	Phe	Gly	Asn	Pro	Asp	Gly	Pro	Gln	Ala	Thr	Ser	Phe	Gly
165				170					175						
Ile	Ala	Leu	Pro	Ala	Trp	Ile	Val	Asp	Gln	Lys	Asn	Ser	Ile	Leu	Val
180			185					190							
Leu	Leu	Val	Tyr	Gly	Leu	Ala	Phe	Met	Val	Ile	Leu	Pro	Val	Val	Val
195		200					205								
Gly	Ser	Trp	Trp	Tyr	Arg	Ser	Ile	Arg	Tyr	Ser	Gly	Asp	Gln	Ile	Leu
210		215					220								
Ile	Arg	Thr	Thr	Gln	Ile	Tyr	Thr	Tyr	Phe	Val	Tyr	Lys	Thr	Arg	Asn
225		230				235					240				
Met	Asp	Met	Lys	Arg	Leu	Ile	Met	Val	Leu	Ala	Gly	Ala	Ser	Glu	Phe
245				250					255						
Asp	Pro	Gln	Tyr	Asn	Lys	Asp	Ala	Thr	Ser	Arg	Pro	Thr	Asp	Asn	Ile
260			265					270							
Leu	Ile	Pro	Gln	Leu	Ile	Arg	Glu	Ile	Gly	Ser	Ile	Asn	Leu	Lys	Lys
275		280					285								
Asn	Glu	Pro	Pro	Leu	Thr	Cys	Pro	Tyr	Ser	Leu	Lys	Ala	Arg	Val	Leu
290		295					300								
Leu	Leu	Ser	His	Leu	Ala	Arg	Met	Lys	Ile	Pro	Glu	Thr	Leu	Glu	Glu

305		310		315		320									
Asp	Gln	Gln	Phe	Met	Leu	Lys	Lys	Cys	Pro	Ala	Leu	Leu	Gln	Glu	Met
				325					330					335	
Val	Asn	Val	Ile	Cys	Gln	Leu	Ile	Val	Met	Ala	Arg	Asn	Arg	Glu	Glu
			340					345					350		
Arg	Glu	Phe	Arg	Ala	Pro	Thr	Leu	Ala	Ser	Leu	Glu	Asn	Cys	Met	Lys
		355					360					365			
Leu	Ser	Gln	Met	Ala	Val	Gln	Gly	Leu	Gln	Gln	Phe	Lys	Ser	Pro	Leu
	370					375					380				
Leu	Gln	Leu	Pro	His	Ile	Glu	Glu	Asp	Asn	Leu	Arg	Arg	Val	Ser	Asn
385					390					395					400
His	Lys	Lys	Tyr	Lys	Ile	Lys	Thr	Ile	Gln	Asp	Leu	Val	Ser	Leu	Lys
				405					410					415	
Glu	Ser	Asp	Arg	His	Thr	Leu	Leu	His	Phe	Leu	Glu	Asp	Glu	Lys	Tyr
			420					425					430		
Glu	Glu	Val	Met	Ala	Val	Leu	Gly	Ser	Phe	Pro	Tyr	Val	Thr	Met	Asp
		435					440					445			
Ile	Lys	Ser	Gln	Val	Leu	Asp	Asp	Glu	Asp	Ser	Asn	Asn	Ile	Thr	Val
	450					455					460				
Gly	Ser	Leu	Val	Thr	Val	Leu	Val	Lys	Leu	Thr	Arg	Gln	Thr	Met	Ala
465					470					475					480
Glu	Val	Phe	Glu	Lys	Glu	Gln	Ser	Ile	Cys	Ala	Ala	Glu	Glu	Gln	Pro
				485					490					495	
Ala	Glu	Asp	Gly	Gln	Gly	Glu	Thr	Asn	Lys	Asn	Arg	Thr	Lys	Gly	Gly
			500					505					510		
Trp	Gln	Gln	Lys	Ser	Lys	Gly	Pro	Lys	Lys	Thr	Ala	Lys	Ser	Lys	Lys
		515					520					525			
Arg	Asn	Leu													
		530													

<210> 27

<211> 558

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 27

Met	Ala	Gly	Gln	Gln	Phe	Gln	Tyr	Asp	Asp	Ser	Gly	Asn	Thr	Phe	Phe	
1				5					10					15		
Tyr	Phe	Leu	Thr	Ser	Phe	Val	Gly	Leu	Ile	Val	Ile	Pro	Ala	Thr	Tyr	
			20					25					30			
Tyr	Leu	Trp	Pro	Arg	Asp	Gln	Asn	Ala	Glu	Gln	Ile	Arg	Leu	Lys	Asn	
		35					40					45				
Ile	Arg	Lys	Val	Tyr	Gly	Arg	Cys	Met	Trp	Tyr	Arg	Leu	Arg	Leu	Leu	
	50					55					60					
Lys	Pro	Gln	Pro	Asn	Ile	Ile	Pro	Thr	Val	Lys	Lys	Ile	Val	Leu	Leu	
65					70					75					80	
Ala	Gly	Trp	Ala	Leu	Phe	Leu	Phe	Leu	Ala	Tyr	Lys	Val	Ser	Lys	Thr	
				85					90					95		
Asp	Arg	Glu	Tyr	Gln	Glu	Tyr	Asn	Pro	Tyr	Glu	Val	Leu	Asn	Leu	Asp	
		100						105					110			
Pro	Gly	Ala	Thr	Val	Ala	Glu	Ile	Lys	Lys	Gln	Tyr	Arg	Leu	Leu	Ser	
		115					120					125				
Leu	Lys	Tyr	His	Pro	Asp	Lys	Gly	Gly	Asp	Glu	Val	Met	Phe	Met	Arg	
	130					135					140					
Ile	Ala	Lys	Ala	Tyr	Ala	Ala	Leu	Thr	Asp	Glu	Glu	Ser	Arg	Lys	Asn	
145					150					155					160	
Trp	Glu	Glu	Phe	Gly	Asn	Pro	Asp	Gly	Pro	Gln	Ala	Thr	Ser	Phe	Gly	
				165					170					175		
Ile	Ala	Leu	Pro	Ala	Trp	Ile	Val	Asp	Gln	Lys	Asn	Ser	Ile	Leu	Val	
			180					185					190			
Leu	Leu	Val	Tyr	Gly	Leu	Ala	Phe	Met	Val	Ile	Leu	Pro	Val	Val	Val	
		195					200					205				
Gly	Ser	Trp	Trp	Tyr	Arg	Ser	Ile	Arg	Tyr	Ser	Gly	Asp	Gln	Ile	Leu	
	210					215					220					
Ile	Arg	Thr	Thr	Gln	Ile	Tyr	Thr	Tyr	Phe	Val	Tyr	Lys	Thr	Arg	Asn	
225					230					235					240	
Met	Asp	Met	Lys	Arg	Leu	Ile	Met	Val	Leu	Ala	Gly	Ala	Ser	Glu	Phe	
			245						250					255		
Asp	Pro	Gln	Tyr	Asn	Lys	Asp	Ala	Thr	Ser	Arg	Pro	Thr	Asp	Asn	Ile	
		260						265					270			
Leu	Ile	Pro	Gln	Leu	Ile	Arg	Glu	Ile	Gly	Ser	Ile	Asn	Leu	Lys	Lys	

275	280	285
Asn Glu Pro Pro Leu Thr Cys Pro Tyr Ser Leu Lys Ala Arg Val Leu		
290	295	300
Leu Leu Ser His Leu Ala Arg Met Lys Ile Pro Glu Thr Leu Glu Glu		
305	310	315 320
Asp Gln Gln Phe Met Leu Lys Lys Cys Pro Ala Leu Leu Gln Glu Met		
	325	330 335
Val Asn Val Ile Cys Gln Leu Ile Val Met Ala Arg Asn Arg Glu Glu		
	340	345 350
Arg Glu Phe Arg Ala Pro Thr Leu Ala Ser Leu Glu Asn Cys Met Lys		
	355	360 365
Leu Ser Gln Met Ala Val Gln Gly Leu Gln Gln Phe Lys Ser Pro Leu		
	370	375 380
Leu Gln Leu Pro His Ile Glu Glu Asp Asn Leu Arg Arg Val Ser Asn		
	385	390 395 400
His Lys Lys Tyr Lys Ile Lys Thr Ile Gln Asp Leu Val Ser Leu Lys		
	405	410 415
Glu Ser Asp Arg His Thr Leu Leu His Phe Leu Glu Asp Glu Lys Tyr		
	420	425 430
Glu Glu Val Met Ala Val Leu Gly Ser Phe Pro Tyr Val Thr Met Asp		
	435	440 445
Ile Lys Ser Gln Val Leu Asp Asp Glu Asp Ser Asn Asn Ile Thr Val		
	450	455 460
Gly Ser Leu Val Thr Val Leu Val Lys Leu Thr Arg Gln Thr Met Ala		
	465	470 475 480
Glu Val Phe Glu Lys Glu Gln Ser Ile Cys Ala Ala Glu Glu Gln Pro		
	485	490 495
Ala Glu Asp Gly Gln Gly Glu Thr Asn Lys Asn Arg Thr Lys Gly Gly		
	500	505 510
Trp Gln Gln Lys Ser Lys Gly Pro Lys Lys Thr Ala Lys Ser Lys Lys		
	515	520 525
Lys Glu Thr Phe Lys Lys Lys Thr Tyr Thr Cys Ala Ile Thr Thr Val		
	530	535 540
Lys Ala Thr Glu Thr Lys Ala Gly Lys Trp Ser Arg Trp Glu		
	545	550 555

<210> 28
<211> 561
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 28
Met Ala Gly Gln Gln Phe Gln Tyr Asp Asp Ser Gly Asn Thr Phe Phe
1 5 10 15
Tyr Phe Leu Thr Ser Phe Val Gly Leu Ile Val Ile Pro Ala Thr Tyr
20 25 30
Tyr Leu Trp Pro Arg Asp Gln Asn Ala Glu Gln Ile Arg Leu Lys Asn
35 40 45
Ile Arg Lys Val Tyr Gly Arg Cys Met Trp Tyr Arg Leu Arg Leu Leu
50 55 60
Lys Pro Gln Pro Asn Ile Ile Pro Thr Val Lys Lys Ile Val Leu Leu
65 70 75 80
Ala Gly Trp Ala Leu Phe Leu Phe Leu Ala Tyr Lys Val Ser Lys Thr
85 90 95
Asp Arg Glu Tyr Gln Glu Tyr Asn Pro Tyr Glu Val Leu Asn Leu Asp
100 105 110
Pro Gly Ala Thr Val Ala Glu Ile Lys Lys Gln Tyr Arg Leu Leu Ser
115 120 125
Leu Lys Tyr His Pro Asp Lys Gly Gly Asp Glu Val Met Phe Met Arg
130 135 140
Ile Ala Lys Ala Tyr Ala Ala Leu Thr Asp Glu Glu Ser Arg Lys Asn
145 150 155 160
Trp Glu Glu Phe Gly Asn Pro Asp Gly Pro Gln Ala Thr Ser Phe Gly
165 170 175
Ile Ala Leu Pro Ala Trp Ile Val Asp Gln Lys Asn Ser Ile Leu Val
180 185 190
Leu Leu Val Tyr Gly Leu Ala Phe Met Val Ile Leu Pro Val Val Val
195 200 205
Gly Ser Trp Trp Tyr Arg Ser Ile Arg Tyr Ser Gly Asp Gln Ile Leu
210 215 220
Ile Arg Thr Thr Gln Ile Tyr Thr Tyr Phe Val Tyr Lys Thr Arg Asn
225 230 235 240

Met	Asp	Met	Lys	Arg	Leu	Ile	Met	Val	Leu	Ala	Gly	Ala	Ser	Glu	Phe	245	250	255	
Asp	Pro	Gln	Tyr	Asn	Lys	Asp	Ala	Thr	Ser	Arg	Pro	Thr	Asp	Asn	Ile	260	265	270	
Leu	Ile	Pro	Gln	Leu	Ile	Arg	Glu	Ile	Gly	Ser	Ile	Asn	Leu	Lys	Lys	275	280	285	
Asn	Glu	Pro	Pro	Leu	Thr	Cys	Pro	Tyr	Ser	Leu	Lys	Ala	Arg	Val	Leu	290	295	300	
Leu	Leu	Ser	His	Leu	Ala	Arg	Met	Lys	Ile	Pro	Glu	Thr	Leu	Glu	Glu	305	310	315	320
Asp	Gln	Gln	Phe	Met	Leu	Lys	Lys	Cys	Pro	Ala	Leu	Leu	Gln	Glu	Met	325	330	335	
Val	Asn	Val	Ile	Cys	Gln	Leu	Ile	Val	Met	Ala	Arg	Asn	Arg	Glu	Glu	340	345	350	
Arg	Glu	Phe	Arg	Ala	Pro	Thr	Leu	Ala	Ser	Leu	Glu	Asn	Cys	Met	Lys	355	360	365	
Leu	Ser	Gln	Met	Ala	Val	Gln	Gly	Leu	Gln	Gln	Phe	Lys	Ser	Pro	Leu	370	375	380	
Leu	Gln	Leu	Pro	His	Ile	Glu	Glu	Asp	Asn	Leu	Arg	Arg	Val	Ser	Asn	385	390	395	400
His	Lys	Lys	Tyr	Lys	Ile	Lys	Thr	Ile	Gln	Asp	Leu	Val	Ser	Leu	Lys	405	410	415	
Glu	Ser	Asp	Arg	His	Thr	Leu	Leu	His	Phe	Leu	Glu	Asp	Glu	Lys	Tyr	420	425	430	
Glu	Glu	Val	Met	Ala	Val	Leu	Gly	Ser	Phe	Pro	Tyr	Val	Thr	Met	Asp	435	440	445	
Ile	Lys	Ser	Gln	Val	Leu	Asp	Asp	Glu	Asp	Ser	Asn	Asn	Ile	Thr	Val	450	455	460	
Gly	Ser	Leu	Val	Thr	Val	Leu	Val	Lys	Leu	Thr	Arg	Gln	Thr	Met	Ala	465	470	475	480
Glu	Val	Phe	Glu	Lys	Glu	Gln	Ser	Ile	Cys	Ala	Ala	Glu	Glu	Gln	Pro	485	490	495	
Ala	Glu	Asp	Gly	Gln	Gly	Glu	Thr	Asn	Lys	Asn	Arg	Thr	Lys	Gly	Gly	500	505	510	
Trp	Gln	Gln	Lys	Ser	Lys	Gly	Pro	Lys	Lys	Thr	Ala	Lys	Ser	Lys	Lys	515	520	525	

Lys Lys Pro Leu Lys Lys Asn Leu His Leu Cys Tyr Tyr His Ser Gln
 530 535 540

Ser Asn Arg Asn Lys Ser Arg Gln Met Glu Ser Leu Gly Met Lys Leu
 545 550 555 560

Gln

<210> 29

<211> 558

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 29

Met Ala Gly Gln Gln Phe Gln Tyr Asp Asp Ser Gly Asn Thr Phe Phe
 1 5 10 15

Tyr Phe Leu Thr Ser Phe Val Gly Leu Ile Val Ile Pro Ala Thr Tyr
 20 25 30

Tyr Leu Trp Pro Arg Asp Gln Asn Ala Glu Gln Ile Arg Leu Lys Asn
 35 40 45

Ile Arg Lys Val Tyr Gly Arg Cys Met Trp Tyr Arg Leu Arg Leu Leu
 50 55 60

Lys Pro Gln Pro Asn Ile Ile Pro Thr Val Lys Lys Ile Val Leu Leu
 65 70 75 80

Ala Gly Trp Ala Leu Phe Leu Phe Leu Ala Tyr Lys Val Ser Lys Thr
 85 90 95

Asp Arg Glu Tyr Gln Glu Tyr Asn Pro Tyr Glu Val Leu Asn Leu Asp
 100 105 110

Pro Gly Ala Thr Val Ala Glu Ile Lys Lys Gln Tyr Arg Leu Leu Ser
 115 120 125

Leu Lys Tyr His Pro Asp Lys Gly Gly Asp Glu Val Met Phe Met Arg
 130 135 140

Ile Ala Lys Ala Tyr Ala Ala Leu Thr Asp Glu Glu Ser Arg Lys Asn
 145 150 155 160

Trp Glu Glu Phe Gly Asn Pro Asp Gly Pro Gln Ala Thr Ser Phe Gly
 165 170 175

Ile	Ala	Leu	Pro	Ala	Trp	Ile	Val	Asp	Gln	Lys	Asn	Ser	Ile	Leu	Val	180	185	190
Leu	Leu	Val	Tyr	Gly	Leu	Ala	Phe	Met	Val	Ile	Leu	Pro	Val	Val	Val	195	200	205
Gly	Ser	Trp	Trp	Tyr	Arg	Ser	Ile	Arg	Tyr	Ser	Gly	Asp	Gln	Ile	Leu	210	215	220
Ile	Arg	Thr	Thr	Gln	Ile	Tyr	Thr	Tyr	Phe	Val	Tyr	Lys	Thr	Arg	Asn	225	230	235
Met	Asp	Met	Lys	Arg	Leu	Ile	Met	Val	Leu	Ala	Gly	Ala	Ser	Glu	Phe	245	250	255
Asp	Pro	Gln	Tyr	Asn	Lys	Asp	Ala	Thr	Ser	Arg	Pro	Thr	Asp	Asn	Ile	260	265	270
Leu	Ile	Pro	Gln	Leu	Ile	Arg	Glu	Ile	Gly	Ser	Ile	Asn	Leu	Lys	Lys	275	280	285
Asn	Glu	Pro	Pro	Leu	Thr	Cys	Pro	Tyr	Ser	Leu	Lys	Ala	Arg	Val	Leu	290	295	300
Leu	Leu	Ser	His	Leu	Ala	Arg	Met	Lys	Ile	Pro	Glu	Thr	Leu	Glu	Glu	305	310	315
Asp	Gln	Gln	Phe	Met	Leu	Lys	Lys	Cys	Pro	Ala	Leu	Leu	Gln	Glu	Met	325	330	335
Val	Asn	Val	Ile	Cys	Gln	Leu	Ile	Val	Met	Ala	Arg	Asn	Arg	Glu	Glu	340	345	350
Arg	Glu	Phe	Arg	Ala	Pro	Thr	Leu	Ala	Ser	Leu	Glu	Asn	Cys	Met	Lys	355	360	365
Leu	Ser	Gln	Met	Ala	Val	Gln	Gly	Leu	Gln	Gln	Phe	Lys	Ser	Pro	Leu	370	375	380
Leu	Gln	Leu	Pro	His	Ile	Glu	Glu	Asp	Asn	Leu	Arg	Arg	Val	Ser	Asn	385	390	395
His	Lys	Lys	Tyr	Lys	Ile	Lys	Thr	Ile	Gln	Asp	Leu	Val	Ser	Leu	Lys	405	410	415
Glu	Ser	Asp	Arg	His	Thr	Leu	Leu	His	Phe	Leu	Glu	Asp	Glu	Lys	Tyr	420	425	430
Glu	Glu	Val	Met	Ala	Val	Leu	Gly	Ser	Phe	Pro	Tyr	Val	Thr	Met	Asp	435	440	445
Ile	Lys	Ser	Gln	Val	Leu	Asp	Asp	Glu	Asp	Ser	Asn	Asn	Ile	Thr	Val	450	455	460

Gly Ser Leu Val Thr Val Leu Val Lys Leu Thr Arg Gln Thr Met Ala
465 470 475 480

Glu Val Phe Glu Lys Glu Gln Ser Ile Cys Ala Ala Glu Glu Gln Pro
485 490 495

Ala Glu Asp Gly Gln Gly Glu Thr Asn Lys Asn Arg Thr Lys Gly Gly
500 505 510

Trp Gln Gln Lys Ser Lys Gly Pro Lys Lys Thr Ala Lys Ser Lys Lys
515 520 525

Lys Lys Pro Leu Lys Lys Lys Thr Tyr Thr Cys Ala Ile Thr Thr Val
530 535 540

Lys Ala Thr Glu Thr Lys Ala Gly Lys Trp Ser Arg Trp Glu
545 550 555

<210> 30

<211> 418

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 30

Met Phe Lys Gly Ile Leu Gln Ser Gly Leu Asp Asn Phe Val Ile Asn
1 5 10 15

His Met Leu Lys Asn Asn Val Ala Gly Gln Thr Ser Ile Gln Thr Leu
20 25 30

Val Pro Asn Thr Asp Gln Lys Ser Thr Ser Val Lys Lys Asp Asn His
35 40 45

Lys Lys Lys Thr Val Lys Met Leu Glu Tyr Leu Gly Lys Asp Val Leu
50 55 60

His Gly Val Phe Asn Tyr Leu Ala Lys His Asp Val Leu Thr Leu Lys
65 70 75 80

Glu Glu Glu Lys Lys Lys Tyr Tyr Asp Ala Lys Ile Glu Asp Lys Ala
85 90 95

Leu Ile Leu Val Asp Ser Leu Arg Lys Asn Arg Val Ala His Gln Met
100 105 110

Phe Thr Gln Thr Leu Leu Asn Met Asp Gln Lys Ile Thr Ser Val Lys
115 120 125

Pro	Leu	Leu	Gln	Ile	Glu	Ala	Gly	Pro	Pro	Glu	Ser	Ala	Glu	Ser	Thr	130	135	140	
Asn	Ile	Leu	Lys	Leu	Cys	Pro	Arg	Glu	Glu	Phe	Leu	Arg	Leu	Cys	Lys	145	150	155	160
Lys	Asn	His	Asp	Glu	Ile	Tyr	Pro	Ile	Lys	Lys	Arg	Glu	Asp	Arg	Arg	165	170	175	
Arg	Leu	Ala	Leu	Ile	Ile	Cys	Asn	Thr	Lys	Phe	Asp	His	Leu	Pro	Ala	180	185	190	
Arg	Asn	Gly	Ala	His	Tyr	Asp	Ile	Val	Gly	Met	Lys	Arg	Leu	Leu	Gln	195	200	205	
Gly	Leu	Gly	Tyr	Thr	Val	Val	Asp	Glu	Lys	Asn	Leu	Thr	Ala	Arg	Asp	210	215	220	
Met	Glu	Ser	Val	Leu	Arg	Ala	Phe	Ala	Ala	Arg	Pro	Glu	His	Lys	Ser	225	230	235	240
Ser	Asp	Ser	Thr	Phe	Leu	Val	Leu	Met	Ser	His	Gly	Ile	Leu	Glu	Gly	245	250	255	
Ile	Cys	Gly	Thr	Ala	His	Lys	Lys	Lys	Lys	Pro	Asp	Val	Leu	Leu	Tyr	260	265	270	
Asp	Thr	Ile	Phe	Gln	Ile	Phe	Asn	Asn	Arg	Asn	Cys	Leu	Ser	Leu	Lys	275	280	285	
Asp	Lys	Pro	Lys	Val	Ile	Ile	Val	Gln	Ala	Cys	Arg	Gly	Glu	Lys	His	290	295	300	
Gly	Glu	Leu	Trp	Val	Arg	Asp	Ser	Pro	Ala	Ser	Leu	Ala	Val	Ile	Ser	305	310	315	320
Ser	Gln	Ser	Ser	Glu	Asn	Leu	Glu	Ala	Asp	Ser	Val	Cys	Lys	Ile	His	325	330	335	
Glu	Glu	Lys	Asp	Phe	Ile	Ala	Phe	Cys	Ser	Ser	Thr	Pro	His	Asn	Val	340	345	350	
Ser	Trp	Arg	Asp	Arg	Thr	Arg	Gly	Ser	Ile	Phe	Ile	Thr	Glu	Leu	Ile	355	360	365	
Thr	Cys	Phe	Gln	Lys	Tyr	Ser	Cys	Cys	Cys	His	Leu	Met	Glu	Ile	Phe	370	375	380	
Arg	Lys	Val	Gln	Lys	Ser	Phe	Glu	Val	Pro	Gln	Ala	Lys	Ala	Gln	Met	385	390	395	400
Pro	Thr	Ile	Glu	Arg	Ala	Thr	Leu	Thr	Arg	Asp	Phe	Tyr	Leu	Phe	Pro	405	410	415	

Gly Asn

<210> 31

<211> 76

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 31

Met Phe Lys Gly Ile Leu Gln Ser Gly Leu Asp Asn Phe Val Ile Asn
1 5 10 15

His Met Leu Lys Asn Asn Val Ala Gly Gln Thr Ser Ile Gln Thr Leu
20 25 30

Val Pro Asn Thr Asp Gln Lys Ser Thr Ser Val Lys Lys Asp Asn His
35 40 45

Lys Lys Lys Gln Leu Arg Cys Trp Asn Thr Trp Ala Lys Met Phe Phe
50 55 60

Met Val Phe Leu Ile Ile Trp Gln Asn Thr Met Phe
65 70 75

<210> 32

<211> 53

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 32

Met Phe Lys Gly Ile Leu Gln Ser Gly Leu Asp Asn Phe Val Ile Asn
1 5 10 15

His Met Leu Lys Asn Asn Val Ala Gly Gln Thr Ser Ile Gln Thr Leu
20 25 30

Val Pro Asn Thr Asp Gln Lys Ser Thr Ser Val Lys Lys Asp Asn His
35 40 45

Lys Lys Lys Asn Ser
50

<210> 33

<211> 343
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 33

Met	Glu	Ser	Lys	Tyr	Lys	Glu	Ile	Leu	Leu	Leu	Thr	Gly	Leu	Asp	Asn	
1				5				10						15		
Ile	Thr	Asp	Glu	Glu	Leu	Asp	Arg	Phe	Lys	Phe	Phe	Leu	Ser	Asp	Glu	
			20					25					30			
Phe	Asn	Ile	Ala	Thr	Gly	Lys	Leu	His	Thr	Ala	Asn	Arg	Ile	Gln	Val	
		35					40					45				
Ala	Thr	Leu	Met	Ile	Gln	Asn	Ala	Gly	Ala	Val	Ser	Ala	Val	Met	Lys	
		50				55					60					
Thr	Ile	Arg	Ile	Phe	Gln	Lys	Leu	Asn	Tyr	Met	Leu	Leu	Ala	Lys	Arg	
	65				70				75						80	
Leu	Gln	Glu	Glu	Lys	Glu	Lys	Val	Asp	Lys	Gln	Tyr	Lys	Ser	Val	Thr	
			85					90						95		
Lys	Pro	Lys	Pro	Leu	Ser	Gln	Ala	Glu	Met	Ser	Pro	Ala	Ala	Ser	Ala	
			100					105					110			
Ala	Ile	Arg	Asn	Asp	Val	Ala	Lys	Gln	Arg	Ala	Ala	Pro	Lys	Val	Ser	
		115					120					125				
Pro	His	Val	Lys	Pro	Glu	Gln	Lys	Gln	Met	Val	Ala	Gln	Gln	Glu	Ser	
		130				135					140					
Ile	Arg	Glu	Gly	Phe	Gln	Lys	Arg	Cys	Leu	Pro	Val	Met	Val	Leu	Lys	
	145				150				155						160	
Ala	Lys	Lys	Pro	Phe	Thr	Phe	Glu	Thr	Gln	Glu	Gly	Lys	Gln	Glu	Met	
				165				170						175		
Phe	His	Ala	Thr	Val	Ala	Thr	Glu	Lys	Glu	Phe	Phe	Phe	Val	Lys	Val	
			180					185					190			
Phe	Asn	Thr	Leu	Leu	Lys	Asp	Lys	Phe	Ile	Pro	Lys	Arg	Ile	Ile	Ile	
		195					200					205				
Ile	Ala	Arg	Tyr	Tyr	Arg	His	Ser	Gly	Phe	Leu	Glu	Val	Asn	Ser	Ala	
	210					215					220					
Ser	Arg	Val	Leu	Asp	Ala	Glu	Ser	Asp	Gln	Lys	Val	Asn	Val	Pro	Leu	
	225				230					235				240		

Asn Ile Ile Arg Lys Ala Gly Glu Thr Pro Lys Ile Asn Thr Leu Gln
 245 250 255
 Thr Gln Pro Leu Gly Thr Ile Val Asn Gly Leu Phe Val Val Gln Lys
 260 265 270
 Val Thr Glu Lys Lys Lys Asn Ile Leu Phe Asp Leu Ser Asp Asn Thr
 275 280 285
 Gly Lys Met Glu Val Leu Gly Val Arg Asn Glu Asp Thr Met Lys Cys
 290 295 300
 Lys Glu Gly Asp Lys Val Arg Leu Thr Phe Phe Thr Leu Ser Lys Asn
 305 310 315 320
 Gly Glu Lys Leu Gln Leu Thr Ser Gly Val His Ser Thr Ile Lys Val
 325 330 335
 Ile Lys Ala Lys Lys Lys Thr
 340

<210> 34

<211> 355

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 34

Met Glu Ser Lys Tyr Lys Glu Ile Leu Leu Leu Thr Gly Leu Asp Asn
 1 5 10 15
 Ile Thr Asp Glu Glu Leu Asp Arg Phe Lys Phe Phe Leu Ser Asp Glu
 20 25 30
 Phe Asn Ile Ala Thr Gly Lys Leu His Thr Ala Asn Arg Ile Gln Val
 35 40 45
 Ala Thr Leu Met Ile Gln Asn Ala Gly Ala Val Ser Ala Val Met Lys
 50 55 60
 Thr Ile Arg Ile Phe Gln Lys Leu Asn Tyr Met Leu Leu Ala Lys Arg
 65 70 75 80
 Leu Gln Glu Glu Lys Glu Lys Val Asp Lys Gln Tyr Lys Ser Val Thr
 85 90 95
 Lys Pro Lys Pro Leu Ser Gln Ala Glu Met Ser Pro Ala Ala Ser Ala
 100 105 110
 Ala Ile Arg Asn Asp Val Ala Lys Gln Arg Ala Ala Pro Lys Val Ser

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 35

Met	Glu	Ser	Lys	Tyr	Lys	Glu	Ile	Leu	Leu	Leu	Thr	Gly	Leu	Asp	Asn		
1				5				10						15			
Ile	Thr	Asp	Glu	Glu	Leu	Asp	Arg	Phe	Lys	Phe	Phe	Leu	Ser	Asp	Glu		
			20					25					30				
Phe	Asn	Ile	Ala	Thr	Gly	Lys	Leu	His	Thr	Ala	Asn	Arg	Ile	Gln	Val		
		35					40					45					
Ala	Thr	Leu	Met	Ile	Gln	Asn	Ala	Gly	Ala	Val	Ser	Ala	Val	Met	Lys		
		50				55					60						
Thr	Ile	Arg	Ile	Phe	Gln	Lys	Leu	Asn	Tyr	Met	Leu	Leu	Ala	Lys	Arg		
	65				70				75					80			
Leu	Gln	Glu	Glu	Lys	Glu	Lys	Val	Asp	Lys	Gln	Tyr	Lys	Ser	Val	Thr		
				85					90					95			
Lys	Pro	Lys	Pro	Leu	Ser	Gln	Ala	Glu	Met	Ser	Pro	Ala	Ala	Ser	Ala		
			100					105					110				
Ala	Ile	Arg	Asn	Asp	Val	Ala	Lys	Gln	Arg	Ala	Ala	Pro	Lys	Val	Ser		
		115					120					125					
Pro	His	Val	Lys	Pro	Glu	Gln	Lys	Gln	Met	Val	Ala	Gln	Gln	Glu	Ser		
		130				135					140						
Ile	Arg	Glu	Gly	Phe	Gln	Lys	Arg	Cys	Leu	Pro	Val	Met	Val	Leu	Lys		
	145				150				155					160			
Ala	Lys	Lys	Pro	Phe	Thr	Phe	Glu	Thr	Gln	Glu	Gly	Lys	Gln	Glu	Met		
				165					170					175			
Phe	His	Ala	Thr	Val	Ala	Thr	Glu	Lys	Glu	Phe	Phe	Phe	Val	Lys	Val		
			180					185					190				
Phe	Asn	Thr	Leu	Leu	Lys	Asp	Lys	Phe	Ile	Pro	Lys	Arg	Ile	Ile	Ile		
		195					200					205					
Ile	Ala	Arg	Tyr	Tyr	Arg	His	Ser	Gly	Phe	Leu	Glu	Val	Asn	Ser	Ala		
	210					215					220						
Ser	Arg	Val	Leu	Asp	Ala	Glu	Ser	Asp	Gln	Lys	Val	Asn	Val	Pro	Leu		
	225				230					235				240			
Asn	Ile	Ile	Arg	Lys	Ala	Gly	Glu	Thr	Pro	Lys	Ile	Asn	Thr	Leu	Gln		
				245					250					255			
Thr	Gln	Pro	Leu	Gly	Thr	Ile	Val	Asn	Gly	Leu	Phe	Val	Val	Gln	Lys		
			260					265						270			

Val Thr Glu Lys Lys Lys Asn Ile Leu Phe Asp Leu Ser Asp Asn Thr
275 280 285

Gly Lys Met Glu Val Leu Gly Val Arg Asn Glu Asp Thr Met Lys Cys
290 295 300

Lys Glu Gly Asp Lys Val Arg Leu Thr Phe Phe Thr Leu Ser Lys Asn
305 310 315 320

Gly Glu Lys Leu Gln Leu Thr Ser Gly Val His Ser Thr Ile Lys Val
325 330 335

Ile Lys Ala Lys Lys Lys Asn Ile Glu Lys
340 345

<210> 36

<211> 650

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 36

Met Met Gly Ile Gly Lys Asn Thr Thr Ser Lys Ser Met Glu Ala Gly
1 5 10 15

Ser Ser Thr Glu Gly Lys Tyr Glu Asp Glu Ala Lys His Pro Ala Phe
20 25 30

Phe Thr Leu Pro Val Val Ile Asn Gly Gly Ala Thr Ser Ser Gly Glu
35 40 45

Gln Asp Asn Glu Asp Thr Glu Leu Met Ala Ile Tyr Thr Thr Glu Asn
50 55 60

Gly Ile Ala Glu Lys Ser Ser Leu Ala Glu Thr Leu Asp Ser Thr Gly
65 70 75 80

Ser Leu Asp Pro Gln Arg Ser Asp Met Ile Tyr Thr Ile Glu Asp Val
85 90 95

Pro Pro Trp Tyr Leu Cys Ile Phe Leu Gly Leu Gln His Tyr Leu Thr
100 105 110

Cys Phe Ser Gly Thr Ile Ala Val Pro Phe Leu Leu Ala Asp Ala Met
115 120 125

Cys Val Gly Tyr Asp Gln Trp Ala Thr Ser Gln Leu Ile Gly Thr Ile
130 135 140

Phe	Phe	Cys	Val	Gly	Ile	Thr	Thr	Leu	Leu	Gln	Thr	Thr	Phe	Gly	Cys	
145					150					155					160	
Arg	Leu	Pro	Leu	Phe	Gln	Thr	Ser	Ala	Phe	Ala	Phe	Leu	Ala	Pro	Ala	
				165					170					175		
Arg	Ala	Ile	Leu	Ser	Leu	Asp	Lys	Trp	Lys	Cys	Asn	Thr	Thr	Asp	Val	
			180					185					190			
Ser	Val	Ala	Asn	Gly	Thr	Ala	Glu	Leu	Leu	His	Thr	Glu	His	Ile	Trp	
	195						200					205				
Tyr	Pro	Arg	Ile	Arg	Glu	Ile	Gln	Gly	Ala	Ile	Ile	Met	Ser	Ser	Leu	
	210					215					220					
Ile	Glu	Val	Val	Ile	Gly	Leu	Leu	Gly	Leu	Pro	Gly	Ala	Leu	Leu	Lys	
225					230					235					240	
Tyr	Ile	Gly	Pro	Leu	Thr	Ile	Thr	Pro	Thr	Val	Ala	Leu	Ile	Gly	Leu	
				245					250					255		
Ser	Gly	Phe	Gln	Ala	Ala	Gly	Glu	Arg	Ala	Gly	Lys	His	Trp	Gly	Ile	
			260					265					270			
Ala	Met	Leu	Thr	Ile	Phe	Leu	Val	Leu	Leu	Phe	Ser	Gln	Tyr	Ala	Arg	
	275						280					285				
Asn	Val	Lys	Phe	Pro	Leu	Pro	Ile	Tyr	Lys	Ser	Lys	Lys	Gly	Trp	Thr	
	290					295					300					
Ala	Tyr	Lys	Leu	Gln	Leu	Phe	Lys	Met	Phe	Pro	Ile	Ile	Leu	Ala	Ile	
305					310					315					320	
Leu	Val	Ser	Trp	Leu	Leu	Cys	Phe	Ile	Phe	Thr	Val	Thr	Asp	Val	Phe	
				325					330					335		
Pro	Pro	Asp	Ser	Thr	Lys	Tyr	Gly	Phe	Tyr	Ala	Arg	Thr	Asp	Ala	Arg	
			340					345					350			
Gln	Gly	Val	Leu	Leu	Val	Ala	Pro	Trp	Phe	Lys	Val	Pro	Tyr	Pro	Phe	
		355					360					365				
Gln	Trp	Gly	Leu	Pro	Thr	Val	Ser	Ala	Ala	Gly	Val	Ile	Gly	Met	Leu	
	370					375					380					
Ser	Ala	Val	Val	Ala	Ser	Ile	Ile	Glu	Ser	Ile	Gly	Asp	Tyr	Tyr	Ala	
385					390					395					400	
Cys	Ala	Arg	Leu	Ser	Cys	Ala	Pro	Pro	Pro	Pro	Ile	His	Ala	Ile	Asn	
				405					410					415		
Arg	Gly	Ile	Phe	Val	Glu	Gly	Leu	Ser	Cys	Val	Leu	Asp	Gly	Ile	Phe	
			420					425					430			

Gly Thr Gly Asn Gly Ser Thr Ser Ser Ser Pro Asn Ile Gly Val Leu
 435 440 445
 Gly Ile Thr Lys Val Gly Ser Arg Arg Val Ile Gln Cys Gly Ala Ala
 450 455 460
 Leu Met Leu Ala Leu Gly Met Ile Gly Lys Phe Ser Ala Leu Phe Ala
 465 470 475 480
 Ser Leu Pro Asp Pro Val Leu Gly Ala Leu Phe Cys Thr Leu Phe Gly
 485 490 495
 Met Ile Thr Ala Val Gly Leu Ser Asn Leu Gln Phe Ile Asp Leu Asn
 500 505 510
 Ser Ser Arg Asn Leu Phe Val Leu Gly Phe Ser Ile Phe Phe Gly Leu
 515 520 525
 Val Leu Pro Ser Tyr Leu Arg Gln Asn Pro Leu Val Thr Gly Ile Thr
 530 535 540
 Gly Ile Asp Gln Val Leu Asn Val Leu Leu Thr Thr Ala Met Phe Val
 545 550 555 560
 Gly Gly Cys Val Ala Phe Ile Leu Asp Asn Thr Ile Pro Gly Thr Pro
 565 570 575
 Glu Glu Arg Gly Ile Arg Lys Trp Lys Lys Gly Val Gly Lys Gly Asn
 580 585 590
 Lys Ser Leu Asp Gly Met Glu Ser Tyr Asn Leu Pro Phe Gly Met Asn
 595 600 605
 Ile Ile Lys Lys Tyr Arg Cys Phe Ser Tyr Leu Pro Ile Ser Pro Thr
 610 615 620
 Phe Val Gly Tyr Thr Trp Lys Gly Leu Arg Lys Ser Asp Asn Ser Arg
 625 630 635 640
 Ser Ser Asp Glu Asp Ser Gln Ala Thr Gly
 645 650

<210> 37

<211> 414

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 37

Met Met Gly Ile Gly Lys Asn Thr Thr Ser Lys Ser Met Glu Ala Gly

1	5	10	15
Ser Ser Thr Glu Gly Lys Tyr Glu Asp Glu Ala Lys His Pro Ala Phe	20	25	30
Phe Thr Leu Pro Val Val Ile Asn Gly Gly Ala Thr Ser Ser Gly Glu	35	40	45
Gln Asp Asn Glu Asp Thr Glu Leu Met Ala Ile Tyr Thr Thr Glu Asn	50	55	60
Gly Ile Ala Glu Lys Ser Ser Leu Ala Glu Thr Leu Asp Ser Thr Gly	65	70	75
Ser Leu Asp Pro Gln Arg Ser Asp Met Ile Tyr Thr Ile Glu Asp Val	85	90	95
Pro Pro Trp Tyr Leu Cys Ile Phe Leu Gly Leu Gln His Tyr Leu Thr	100	105	110
Cys Phe Ser Gly Thr Ile Ala Val Pro Phe Leu Leu Ala Asp Ala Met	115	120	125
Cys Val Gly Tyr Asp Gln Trp Ala Thr Ser Gln Leu Ile Gly Thr Ile	130	135	140
Phe Phe Cys Val Gly Ile Thr Thr Leu Leu Gln Thr Thr Phe Gly Cys	145	150	155
Arg Leu Pro Leu Phe Gln Thr Ser Ala Phe Ala Phe Leu Ala Pro Ala	165	170	175
Arg Ala Ile Leu Ser Leu Asp Lys Trp Lys Cys Asn Thr Thr Asp Val	180	185	190
Ser Val Ala Asn Gly Thr Ala Glu Leu Leu His Thr Glu His Ile Trp	195	200	205
Tyr Pro Arg Ile Arg Glu Ile Gln Gly Ala Ile Ile Met Ser Ser Leu	210	215	220
Ile Glu Val Val Ile Gly Leu Leu Gly Leu Pro Gly Ala Leu Leu Lys	225	230	235
Tyr Ile Gly Pro Leu Thr Ile Thr Pro Thr Val Ala Leu Ile Gly Leu	245	250	255
Ser Gly Phe Gln Ala Ala Gly Glu Arg Ala Gly Lys His Trp Gly Ile	260	265	270
Ala Met Leu Thr Ile Phe Leu Val Leu Leu Phe Ser Gln Tyr Ala Arg	275	280	285
Asn Val Lys Phe Pro Leu Pro Ile Tyr Lys Ser Lys Lys Gly Trp Thr			

290 295 300
 Ala Tyr Lys Leu Gln Leu Phe Lys Met Phe Pro Ile Ile Leu Ala Ile
 305 310 315 320
 Leu Val Ser Trp Leu Leu Cys Phe Ile Phe Thr Val Thr Asp Val Phe
 325 330 335
 Pro Pro Asp Ser Thr Lys Tyr Gly Phe Tyr Ala Arg Thr Asp Ala Arg
 340 345 350
 Gln Gly Val Leu Leu Val Ala Pro Trp Phe Lys Val Pro Tyr Pro Phe
 355 360 365
 Gln Trp Gly Leu Pro Thr Val Ser Ala Ala Gly Val Ile Gly Met Leu
 370 375 380
 Ser Ala Val Val Ala Ser Ile Ile Glu Ser Ile Gly Asp Tyr Tyr Ala
 385 390 395 400
 Cys Ala Arg Leu Ser Cys Ala Pro Pro Pro Pro Ser Thr Gln
 405 410

<210> 38

<211> 428

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 38

Met Met Gly Ile Gly Lys Asn Thr Thr Ser Lys Ser Met Glu Ala Gly
 1 5 10 15
 Ser Ser Thr Glu Gly Lys Tyr Glu Asp Glu Ala Lys His Pro Ala Phe
 20 25 30
 Phe Thr Leu Pro Val Val Ile Asn Gly Gly Ala Thr Ser Ser Gly Glu
 35 40 45
 Gln Asp Asn Glu Asp Thr Glu Leu Met Ala Ile Tyr Thr Thr Glu Asn
 50 55 60
 Gly Ile Ala Glu Lys Ser Ser Leu Ala Glu Thr Leu Asp Ser Thr Gly
 65 70 75 80
 Ser Leu Asp Pro Gln Arg Ser Asp Met Ile Tyr Thr Ile Glu Asp Val
 85 90 95
 Pro Pro Trp Tyr Leu Cys Ile Phe Leu Gly Leu Gln His Tyr Leu Thr
 100 105 110

Cys	Phe	Ser	Gly	Thr	Ile	Ala	Val	Pro	Phe	Leu	Leu	Ala	Asp	Ala	Met	115	120	125
Cys	Val	Gly	Tyr	Asp	Gln	Trp	Ala	Thr	Ser	Gln	Leu	Ile	Gly	Thr	Ile	130	135	140
Phe	Phe	Cys	Val	Gly	Ile	Thr	Thr	Leu	Leu	Gln	Thr	Thr	Phe	Gly	Cys	145	150	155
Arg	Leu	Pro	Leu	Phe	Gln	Thr	Ser	Ala	Phe	Ala	Phe	Leu	Ala	Pro	Ala	165	170	175
Arg	Ala	Ile	Leu	Ser	Leu	Asp	Lys	Trp	Lys	Cys	Asn	Thr	Thr	Asp	Val	180	185	190
Ser	Val	Ala	Asn	Gly	Thr	Ala	Glu	Leu	Leu	His	Thr	Glu	His	Ile	Trp	195	200	205
Tyr	Pro	Arg	Ile	Arg	Glu	Ile	Gln	Gly	Ala	Ile	Ile	Met	Ser	Ser	Leu	210	215	220
Ile	Glu	Val	Val	Ile	Gly	Leu	Leu	Gly	Leu	Pro	Gly	Ala	Leu	Leu	Lys	225	230	235
Tyr	Ile	Gly	Pro	Leu	Thr	Ile	Thr	Pro	Thr	Val	Ala	Leu	Ile	Gly	Leu	245	250	255
Ser	Gly	Phe	Gln	Ala	Ala	Gly	Glu	Arg	Ala	Gly	Lys	His	Trp	Gly	Ile	260	265	270
Ala	Met	Leu	Thr	Ile	Phe	Leu	Val	Leu	Leu	Phe	Ser	Gln	Tyr	Ala	Arg	275	280	285
Asn	Val	Lys	Phe	Pro	Leu	Pro	Ile	Tyr	Lys	Ser	Lys	Lys	Gly	Trp	Thr	290	295	300
Ala	Tyr	Lys	Leu	Gln	Leu	Phe	Lys	Met	Phe	Pro	Ile	Ile	Leu	Ala	Ile	305	310	315
Leu	Val	Ser	Trp	Leu	Leu	Cys	Phe	Ile	Phe	Thr	Val	Thr	Asp	Val	Phe	325	330	335
Pro	Pro	Asp	Ser	Thr	Lys	Tyr	Gly	Phe	Tyr	Ala	Arg	Thr	Asp	Ala	Arg	340	345	350
Gln	Gly	Val	Leu	Leu	Val	Ala	Pro	Trp	Phe	Lys	Val	Pro	Tyr	Pro	Phe	355	360	365
Gln	Trp	Gly	Leu	Pro	Thr	Val	Ser	Ala	Ala	Gly	Val	Ile	Gly	Met	Leu	370	375	380
Ser	Ala	Val	Val	Ala	Ser	Ile	Ile	Glu	Ser	Ile	Gly	Asp	Tyr	Tyr	Ala	385	390	395
																		400

Cys Ala Arg Leu Ser Cys Ala Pro Pro Pro Pro His Pro Arg Asn Lys
 405 410 415

Gln Gly Asn Phe Arg Gly Arg Pro Leu Leu Cys Ser
 420 425

<210> 39

<211> 807

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 39

Met Pro Lys Ala Pro Lys Gln Gln Pro Pro Glu Pro Glu Trp Ile Gly
 1 5 10 15

Asp Gly Glu Ser Thr Ser Pro Ser Asp Lys Val Val Lys Lys Gly Lys
 20 25 30

Lys Asp Lys Lys Ile Lys Lys Thr Phe Phe Glu Glu Leu Ala Val Glu
 35 40 45

Asp Lys Gln Ala Gly Glu Glu Glu Lys Val Leu Lys Glu Lys Glu Gln
 50 55 60

Gln Gln Gln Gln Gln Gln Gln Gln Gln Lys Lys Lys Arg Asp Thr Arg
 65 70 75 80

Lys Gly Arg Arg Lys Lys Asp Val Asp Asp Asp Gly Glu Glu Lys Glu
 85 90 95

Leu Met Glu Arg Leu Lys Lys Leu Ser Val Pro Thr Ser Asp Glu Glu
 100 105 110

Asp Glu Val Pro Ala Pro Lys Pro Arg Gly Gly Lys Lys Thr Lys Gly
 115 120 125

Gly Asn Val Phe Ala Ala Leu Ile Gln Asp Gln Ser Glu Glu Glu Glu
 130 135 140

Glu Glu Glu Lys His Pro Pro Lys Pro Ala Lys Pro Glu Lys Asn Arg
 145 150 155 160

Ile Asn Lys Ala Val Ser Glu Glu Gln Gln Pro Ala Leu Lys Gly Lys
 165 170 175

Lys Gly Lys Glu Glu Lys Ser Lys Gly Lys Ala Lys Pro Gln Asn Lys
 180 185 190

Phe	Ala	Ala	Leu	Asp	Asn	Glu	Glu	Glu	Asp	Lys	Glu	Glu	Glu	Ile	Ile	
	195						200					205				
Lys	Glu	Lys	Glu	Pro	Pro	Lys	Gln	Gly	Lys	Glu	Lys	Ala	Lys	Lys	Ala	
	210					215					220					
Glu	Gln	Met	Glu	Tyr	Glu	Arg	Gln	Val	Ala	Ser	Leu	Lys	Ala	Ala	Asn	
225					230					235					240	
Ala	Ala	Glu	Asn	Asp	Phe	Ser	Val	Ser	Gln	Ala	Glu	Met	Ser	Ser	Arg	
				245					250					255		
Gln	Ala	Met	Leu	Glu	Asn	Ala	Ser	Asp	Ile	Lys	Leu	Glu	Lys	Phe	Ser	
			260					265					270			
Ile	Ser	Ala	His	Gly	Lys	Glu	Leu	Phe	Val	Asn	Ala	Asp	Leu	Tyr	Ile	
		275					280					285				
Val	Ala	Gly	Arg	Arg	Tyr	Gly	Leu	Val	Gly	Pro	Asn	Gly	Lys	Gly	Lys	
	290					295					300					
Thr	Thr	Leu	Leu	Lys	His	Ile	Ala	Asn	Arg	Ala	Leu	Ser	Ile	Pro	Pro	
305					310					315					320	
Asn	Ile	Asp	Val	Leu	Leu	Cys	Glu	Gln	Glu	Val	Val	Ala	Asp	Glu	Thr	
				325					330					335		
Pro	Ala	Val	Gln	Ala	Val	Leu	Arg	Ala	Asp	Thr	Lys	Arg	Leu	Lys	Leu	
			340					345					350			
Leu	Glu	Glu	Glu	Arg	Arg	Leu	Gln	Gly	Gln	Leu	Glu	Gln	Gly	Asp	Asp	
		355					360					365				
Thr	Ala	Ala	Glu	Arg	Leu	Glu	Lys	Val	Tyr	Glu	Glu	Leu	Arg	Ala	Thr	
	370					375					380					
Gly	Ala	Ala	Ala	Ala	Glu	Ala	Lys	Ala	Arg	Arg	Ile	Leu	Ala	Gly	Leu	
385					390				395						400	
Gly	Phe	Asp	Pro	Glu	Met	Gln	Asn	Arg	Pro	Thr	Gln	Lys	Phe	Ser	Gly	
				405					410					415		
Gly	Trp	Arg	Met	Arg	Val	Ser	Leu	Ala	Arg	Ala	Leu	Phe	Met	Glu	Pro	
			420					425					430			
Thr	Leu	Leu	Met	Leu	Asp	Glu	Pro	Thr	Asn	His	Leu	Asp	Leu	Asn	Ala	
		435					440					445				
Val	Ile	Trp	Leu	Asn	Asn	Tyr	Leu	Gln	Gly	Trp	Arg	Lys	Thr	Leu	Leu	
	450					455					460					
Ile	Val	Ser	His	Asp	Gln	Gly	Phe	Leu	Asp	Asp	Val	Cys	Thr	Asp	Ile	
465					470					475					480	

Ile	His	Leu	Asp	Ala	Gln	Arg	Leu	His	Tyr	Tyr	Arg	Gly	Asn	Tyr	Met		
				485					490					495			
Thr	Phe	Lys	Lys	Met	Tyr	Gln	Gln	Lys	Gln	Lys	Glu	Leu	Leu	Lys	Gln		
			500					505					510				
Tyr	Glu	Lys	Gln	Glu	Lys	Lys	Leu	Lys	Glu	Leu	Lys	Ala	Gly	Gly	Lys		
		515					520					525					
Ser	Thr	Lys	Gln	Ala	Glu	Lys	Gln	Thr	Lys	Glu	Ala	Leu	Thr	Arg	Lys		
	530					535					540						
Gln	Gln	Lys	Cys	Arg	Arg	Lys	Asn	Gln	Asp	Glu	Glu	Ser	Gln	Glu	Ala		
545					550				555						560		
Pro	Glu	Leu	Leu	Lys	Arg	Pro	Lys	Glu	Tyr	Thr	Val	Arg	Phe	Thr	Phe		
			565					570						575			
Pro	Asp	Pro	Pro	Pro	Leu	Ser	Pro	Pro	Val	Leu	Gly	Leu	His	Gly	Val		
			580					585					590				
Thr	Phe	Gly	Tyr	Gln	Gly	Gln	Lys	Pro	Leu	Phe	Lys	Asn	Leu	Asp	Phe		
		595					600					605					
Gly	Ile	Asp	Met	Asp	Ser	Arg	Ile	Cys	Ile	Val	Gly	Pro	Asn	Gly	Val		
	610					615					620						
Gly	Lys	Ser	Thr	Leu	Leu	Leu	Leu	Leu	Thr	Gly	Lys	Leu	Thr	Pro	Thr		
625				630					635					640			
His	Gly	Glu	Met	Arg	Lys	Asn	His	Arg	Leu	Lys	Ile	Gly	Phe	Phe	Asn		
			645					650					655				
Gln	Gln	Tyr	Ala	Glu	Gln	Leu	Arg	Met	Glu	Glu	Thr	Pro	Thr	Glu	Tyr		
			660					665					670				
Leu	Gln	Arg	Gly	Phe	Asn	Leu	Pro	Tyr	Gln	Asp	Ala	Arg	Lys	Cys	Leu		
		675					680					685					
Gly	Arg	Phe	Gly	Leu	Glu	Ser	His	Ala	His	Thr	Ile	Gln	Ile	Cys	Lys		
	690					695					700						
Leu	Ser	Gly	Gly	Gln	Lys	Ala	Arg	Val	Val	Phe	Ala	Glu	Leu	Ala	Cys		
705				710						715				720			
Arg	Glu	Pro	Asp	Val	Leu	Ile	Leu	Asp	Glu	Pro	Thr	Asn	Asn	Leu	Asp		
			725					730						735			
Ile	Glu	Ser	Ile	Asp	Ala	Leu	Gly	Glu	Ala	Ile	Asn	Glu	Tyr	Lys	Gly		
		740					745					750					
Ala	Val	Ile	Val	Val	Ser	His	Asp	Ala	Arg	Leu	Ile	Thr	Glu	Thr	Asn		
		755					760					765					

Cys Gln Leu Trp Val Val Glu Glu Gln Ser Val Ser Gln Ile Asp Gly
770 775 780

Asp Phe Glu Asp Tyr Lys Arg Glu Val Leu Glu Ala Leu Gly Glu Val
785 790 795 800

Met Val Ser Arg Pro Arg Glu
805

<210> 40

<211> 134

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 40

Met Pro Lys Ala Pro Lys Gln Gln Pro Pro Glu Pro Glu Trp Ile Gly
1 5 10 15

Asp Gly Glu Ser Thr Ser Pro Ser Asp Lys Val Val Lys Lys Gly Lys
20 25 30

Lys Asp Lys Lys Ile Lys Lys Thr Phe Phe Glu Glu Leu Ala Val Glu
35 40 45

Asp Lys Gln Ala Gly Glu Glu Glu Lys Val Leu Lys Glu Lys Glu Gln
50 55 60

Gln Gln Gln Gln Gln Gln Gln Gln Gln Lys Lys Ser Glu Ile Pro Glu
65 70 75 80

Lys Ala Gly Gly Arg Arg Met Trp Met Met Met Glu Lys Arg Lys Ser
85 90 95

Ser Trp Ser Val Leu Arg Ser Ser Gln Cys Gln Pro Val Met Arg Arg
100 105 110

Met Lys Tyr Pro Pro Gln Asn Pro Ala Glu Gly Arg Lys Pro Arg Val
115 120 125

Val Met Phe Leu Gln Pro
130

<210> 41

<211> 89

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 41

Met	Pro	Lys	Ala	Pro	Lys	Gln	Gln	Pro	Pro	Glu	Pro	Glu	Trp	Ile	Gly		
1				5					10					15			
Asp	Gly	Glu	Ser	Thr	Ser	Pro	Ser	Asp	Lys	Val	Val	Lys	Lys	Gly	Lys		
			20					25					30				
Lys	Asp	Lys	Lys	Ile	Lys	Lys	Thr	Phe	Phe	Glu	Glu	Leu	Ala	Val	Glu		
		35					40					45					
Asp	Lys	Gln	Ala	Gly	Glu	Glu	Glu	Lys	Val	Leu	Lys	Glu	Lys	Glu	Gln		
	50					55					60						
Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Lys	Lys	Lys	Ala	Arg	Tyr	Pro		
65					70					75					80		
Lys	Arg	Gln	Ala	Glu	Glu	Gly	Cys	Gly									
				85													

<210> 42

<211> 286

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 42

Ser	Pro	Asp	Tyr	Phe	Pro	Gln	Ile	Ser	Ser	Gln	Phe	Gly	Thr	Val	Glu		
1				5					10					15			
Lys	Met	Glu	Lys	Ile	Phe	Ile	Ser	Ser	Ser	Thr	Lys	Ala	Glu	Gly	Lys		
			20					25					30				
Gly	Ile	Ser	Pro	Phe	Glu	Ala	Pro	Ile	Asn	Thr	Gln	Ala	Pro	Pro	Glu		
		35					40					45					
Lys	Gly	Lys	Glu	Ala	Val	Val	Gln	Glu	Pro	Glu	Arg	Ser	Trp	Phe	Gln		
	50					55					60						
Thr	Lys	Glu	Glu	Arg	Lys	Lys	Glu	Lys	Ile	Ala	Lys	Ala	Leu	Gln	Glu		
65				70					75					80			
Phe	Asp	Leu	Ala	Leu	Arg	Gly	Lys	Lys	Lys	Arg	Lys	Lys	Phe	Met	Lys		
			85					90					95				
Asp	Ala	Lys	Lys	Lys	Gly	Glu	Met	Thr	Ala	Glu	Glu	Arg	Ser	Gln	Phe		

100					105					110						
Glu	Ile	Leu	Lys	Ala	Gln	Met	Phe	Ala	Glu	Arg	Leu	Ala	Lys	Arg	Asn	
115					120					125						
Arg	Arg	Ala	Lys	Arg	Ala	Arg	Ala	Met	Pro	Glu	Glu	Glu	Pro	Val	Arg	
130					135					140						
Gly	Pro	Ala	Lys	Lys	Gln	Lys	Gln	Gly	Lys	Lys	Ser	Val	Phe	Asp	Glu	
145					150					155					160	
Glu	Leu	Thr	Asn	Thr	Ser	Lys	Lys	Ala	Leu	Lys	Gln	Tyr	Arg	Ala	Gly	
165					170					175						
Pro	Ser	Phe	Glu	Glu	Arg	Lys	Gln	Leu	Gly	Leu	Pro	His	Gln	Arg	Arg	
180					185					190						
Gly	Gly	Asn	Phe	Lys	Ser	Asn	Pro	Asp	Thr	Arg	Gly	Gly	Ser	Ser	Cys	
195					200					205						
Arg	Gly	Leu	Lys	Lys	Phe	Met	Gly	Ala	Ala	Leu	Lys	Ser	Leu	Pro	Cys	
210					215					220						
Gly	Lys	Ser	Ser	Trp	Leu	Val	Cys	Leu	Phe	Ser	Ile	Cys	Leu	Lys	Lys	
225					230					235					240	
Lys	Gln	Lys	Gln	Lys	Thr	Thr	Leu	Trp	Cys	Gly	Gly	Met	Val	Arg	Ser	
245					250					255						
Tyr	Phe	Pro	Lys	His	Val	Cys	Gln	Ser	Pro	Phe	Leu	Leu	Ile	Ser	Phe	
260					265					270						
His	Met	Thr	Ile	Leu	Asn	Gly	Ser	Ile	Phe	Gly	Lys	Arg	Glu			
275					280					285						

<210> 43

<211> 251

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 43

Met	Glu	Lys	Ile	Phe	Ile	Ser	Ser	Ser	Thr	Lys	Ala	Glu	Gly	Lys	Gly
1				5					10					15	
Ile	Ser	Pro	Phe	Glu	Ala	Pro	Ile	Asn	Thr	Gln	Ala	Pro	Pro	Glu	Lys
			20					25					30		
Gly	Lys	Glu	Ala	Val	Val	Gln	Glu	Pro	Glu	Arg	Ser	Trp	Phe	Gln	Thr
		35					40					45			

Lys Glu Glu Arg Lys Lys Glu Lys Ile Ala Lys Ala Leu Gln Glu Phe
 50 55 60
 Asp Leu Ala Leu Arg Gly Lys Lys Lys Arg Lys Lys Phe Met Lys Asp
 65 70 75 80
 Ala Lys Lys Lys Gly Glu Met Thr Ala Glu Glu Arg Ser Gln Phe Glu
 85 90 95
 Ile Leu Lys Ala Gln Met Phe Ala Glu Arg Leu Ala Lys Arg Asn Arg
 100 105 110
 Arg Ala Lys Arg Ala Arg Ala Met Pro Glu Glu Glu Pro Val Arg Gly
 115 120 125
 Pro Ala Lys Lys Gln Lys Gln Gly Lys Lys Ser Val Phe Asp Glu Glu
 130 135 140
 Leu Thr Asn Thr Ser Lys Lys Ala Leu Lys Gln Tyr Arg Ala Gly Pro
 145 150 155 160
 Ser Phe Glu Glu Arg Lys Gln Leu Gly Leu Pro His Gln Arg Arg Gly
 165 170 175
 Gly Asn Phe Lys Ser Asn Pro Asp Thr Arg Gly Gly Ser Ser Cys Arg
 180 185 190
 Gly Leu Lys Lys Phe Met Gly Ala Ala Leu Lys Ser Leu Pro Cys Gly
 195 200 205
 Lys Ser Ser Trp Leu Val Cys Leu Phe Ser Ile Cys Leu Lys Lys Asn
 210 215 220
 Lys Asn Lys Lys Gln His Phe Gly Val Val Val Trp Tyr Val Ala Ile
 225 230 235 240
 Phe Leu Ser Met Ser Val Asn Leu Pro Ser Cys
 245 250

<210> 44

<211> 238

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 44

Met Glu Lys Ile Phe Ile Ser Ser Ser Thr Lys Ala Glu Gly Lys Gly
 1 5 10 15

1	5	10	15
Glu Gln Ile Met Lys Thr Gly Ala Leu Leu Leu Gln Gly Phe Ile Gln	20	25	30
Asp Arg Ala Gly Arg Met Gly Gly Glu Ala Pro Glu Leu Ala Leu Asp	35	40	45
Pro Val Pro Gln Asp Ala Ser Thr Lys Lys Leu Ser Glu Cys Leu Lys	50	55	60
Arg Ile Gly Asp Glu Leu Asp Ser Asn Met Glu Leu Gln Arg Met Ile	65	70	75
Ala Ala Val Asp Thr Asp Ser Pro Arg Glu Val Phe Phe Arg Val Ala	85	90	95
Ala Asp Met Phe Ser Asp Gly Asn Phe Asn Trp Gly Arg Val Val Ala	100	105	110
Leu Phe Tyr Phe Ala Ser Lys Leu Val Leu Lys Ala Leu Cys Thr Lys	115	120	125
Val Pro Glu Leu Ile Arg Thr Ile Met Gly Trp Thr Leu Asp Phe Leu	130	135	140
Arg Glu Arg Leu Leu Gly Trp Ile Gln Asp Gln Gly Gly Trp Asp Gly	145	150	155
Leu Leu Ser Tyr Phe Gly Thr Pro Thr Trp Gln Thr Val Thr Ile Phe	165	170	175
Val Ala Gly Val Leu Thr Ala Ser Leu Thr Ile Trp Lys Lys Met Gly	180	185	190

<210> 46

<211> 58

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 46

Met Asp Gly Ser Gly Glu Gln Pro Arg Gly Gly Gly Pro Thr Ser Ser	1	5	10	15
Glu Gln Ile Met Lys Thr Gly Ala Leu Leu Leu Gln Gly Phe Ile Gln	20	25	30	

Asp Arg Ala Gly Arg Met Gly Gly Arg His Pro Ser Trp Pro Trp Thr
35 40 45

Arg Cys Leu Arg Met Arg Pro Pro Arg Ser
50 55

<210> 47

<211> 72

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 47

Met Asp Gly Ser Gly Glu Gln Pro Arg Gly Gly Gly Pro Thr Ser Ser
1 5 10 15

Glu Gln Ile Met Lys Thr Gly Ala Leu Leu Leu Gln Gly Phe Ile Gln
20 25 30

Asp Arg Ala Gly Arg Met Gly Gly Gly Gly Thr Arg Ala Gly Pro Gly
35 40 45

Pro Gly Ala Ser Gly Cys Val His Gln Glu Ala Glu Arg Val Ser Gln
50 55 60

Ala His Arg Gly Arg Thr Gly Gln
65 70

<210> 48

<211> 246

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 48

Met Ala Phe Leu Arg Ser Met Trp Gly Val Leu Ser Ala Leu Gly Arg
1 5 10 15

Ser Gly Ala Glu Leu Cys Thr Gly Cys Gly Ser Arg Leu Arg Ser Pro
20 25 30

Phe Ser Phe Val Tyr Leu Pro Arg Trp Phe Ser Ser Val Leu Ala Ser
35 40 45

Cys Pro Lys Lys Pro Val Ser Ser Tyr Leu Arg Phe Ser Lys Glu Gln

50					55					60					
Leu	Pro	Ile	Phe	Lys	Ala	Gln	Asn	Pro	Asp	Ala	Lys	Thr	Thr	Glu	Leu
65					70					75					80
Ile	Arg	Arg	Ile	Ala	Gln	Arg	Trp	Arg	Glu	Leu	Pro	Asp	Ser	Lys	Lys
				85					90					95	
Lys	Ile	Tyr	Gln	Asp	Ala	Tyr	Arg	Ala	Glu	Trp	Gln	Val	Tyr	Lys	Glu
			100					105					110		
Glu	Ile	Ser	Arg	Phe	Lys	Glu	Gln	Leu	Thr	Pro	Ser	Gln	Ile	Met	Ser
		115					120					125			
Leu	Glu	Lys	Glu	Ile	Met	Asp	Lys	His	Leu	Lys	Arg	Lys	Ala	Met	Thr
	130					135					140				
Lys	Lys	Lys	Glu	Leu	Thr	Leu	Leu	Gly	Lys	Pro	Lys	Arg	Pro	Arg	Ser
145						150					155				160
Ala	Tyr	Asn	Val	Tyr	Val	Ala	Glu	Arg	Phe	Gln	Glu	Ala	Lys	Gly	Asp
				165					170					175	
Ser	Pro	Gln	Glu	Lys	Leu	Lys	Thr	Val	Lys	Glu	Asn	Trp	Lys	Asn	Leu
			180					185					190		
Ser	Asp	Ser	Glu	Lys	Glu	Leu	Tyr	Ile	Gln	His	Ala	Lys	Glu	Asp	Glu
		195					200					205			
Thr	Arg	Tyr	His	Asn	Glu	Met	Lys	Ser	Trp	Glu	Glu	Gln	Met	Ile	Glu
	210					215						220			
Val	Gly	Arg	Lys	Asp	Leu	Leu	Arg	Arg	Thr	Ile	Lys	Lys	Gln	Arg	Lys
225						230					235				240
Tyr	Gly	Ala	Glu	Glu	Cys										
				245											

<210> 49

<211> 148

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 49

Met	Ala	Phe	Leu	Arg	Ser	Met	Trp	Gly	Val	Leu	Ser	Ala	Leu	Gly	Arg
1					5				10					15	

Ser	Gly	Ala	Glu	Leu	Cys	Thr	Gly	Cys	Gly	Ser	Arg	Leu	Arg	Ser	Pro
			20					25					30		

Lys Ile Tyr Gln Asp Ala Tyr Arg Ala Glu Trp Gln Val Tyr Lys Glu
 100 105 110
 Glu Ile Ser Arg Phe Lys Glu Gln Leu Thr Pro Ser Gln Ile Met Ser
 115 120 125
 Leu Glu Lys Glu Ile Met Asp Lys His Leu Lys Arg Lys Ala Met Thr
 130 135 140
 Lys Lys Lys Arg Val Asn Thr Ala Trp Lys Thr Lys Lys Thr Ser Phe
 145 150 155 160
 Ser Leu

<210> 51
 <211> 235
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 51
 Met Thr Val Leu Ala Pro Ala Trp Ser Pro Thr Thr Tyr Leu Leu Leu
 1 5 10 15
 Leu Leu Leu Leu Ser Ser Gly Leu Ser Gly Thr Gln Asp Cys Ser Phe
 20 25 30
 Gln His Ser Pro Ile Ser Ser Asp Phe Ala Val Lys Ile Arg Glu Leu
 35 40 45
 Ser Asp Tyr Leu Leu Gln Asp Tyr Pro Val Thr Val Ala Ser Asn Leu
 50 55 60
 Gln Asp Glu Glu Leu Cys Gly Gly Leu Trp Arg Leu Val Leu Ala Gln
 65 70 75 80
 Arg Trp Met Glu Arg Leu Lys Thr Val Ala Gly Ser Lys Met Gln Gly
 85 90 95
 Leu Leu Glu Arg Val Asn Thr Glu Ile His Phe Val Thr Lys Cys Ala
 100 105 110
 Phe Gln Pro Pro Pro Ser Cys Leu Arg Phe Val Gln Thr Asn Ile Ser
 115 120 125
 Arg Leu Leu Gln Glu Thr Ser Glu Gln Leu Val Ala Leu Lys Pro Trp
 130 135 140
 Ile Thr Arg Gln Asn Phe Ser Arg Cys Leu Glu Leu Gln Cys Gln Pro

<210> 53
<211> 161
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 53
Met Thr Val Leu Ala Pro Ala Trp Ser Pro Thr Thr Tyr Leu Leu Leu
1 5 10 15
Leu Leu Leu Leu Ser Ser Gly Leu Ser Gly Thr Gln Asp Cys Ser Phe
20 25 30
Gln His Ser Pro Ile Ser Ser Asp Phe Ala Val Lys Ile Arg Glu Leu
35 40 45
Ser Asp Tyr Leu Leu Gln Asp Tyr Pro Val Thr Val Ala Ser Asn Leu
50 55 60
Gln Asp Glu Glu Leu Cys Gly Gly Leu Trp Arg Leu Val Leu Ala Gln
65 70 75 80
Arg Trp Met Glu Arg Leu Lys Thr Val Ala Gly Ser Lys Met Gln Gly
85 90 95
Leu Leu Glu Arg Val Asn Thr Glu Ile His Phe Val Thr Lys Cys Ala
100 105 110
Phe Gln Pro Pro Pro Gln Leu Ser Ser Leu Arg Pro Asp Gln His Leu
115 120 125
Pro Pro Pro Ala Gly Asp Leu Arg Ala Ala Gly Gly Ala Glu Ala Leu
130 135 140
Asp His Ser Pro Glu Leu Leu Pro Val Pro Gly Ala Ala Val Ser Ala
145 150 155 160
Arg

<210> 54
<211> 920
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 54

Met	Leu	Gln	Gly	His	Phe	Trp	Leu	Val	Arg	Glu	Gly	Ile	Met	Ile	Ser	
1				5					10					15		
Pro	Ser	Ser	Pro	Pro	Pro	Pro	Asn	Leu	Phe	Phe	Phe	Pro	Leu	Gln	Ile	
			20					25					30			
Phe	Pro	Phe	Pro	Phe	Thr	Ser	Phe	Pro	Ser	His	Leu	Leu	Ser	Leu	Thr	
		35					40					45				
Pro	Pro	Lys	Ala	Cys	Tyr	Leu	Lys	Ala	Ile	Glu	Thr	Gln	Pro	Asn	Phe	
	50					55					60					
Ala	Val	Ala	Trp	Ser	Asn	Leu	Gly	Cys	Val	Phe	Asn	Ala	Gln	Gly	Glu	
65					70					75					80	
Ile	Trp	Leu	Ala	Ile	His	His	Phe	Glu	Lys	Ala	Val	Thr	Leu	Asp	Pro	
				85					90					95		
Asn	Phe	Leu	Asp	Ala	Tyr	Ile	Asn	Leu	Gly	Asn	Val	Leu	Lys	Glu	Ala	
			100					105					110			
Arg	Ile	Phe	Asp	Arg	Ala	Val	Ala	Ala	Tyr	Leu	Arg	Ala	Leu	Ser	Leu	
		115					120					125				
Ser	Pro	Asn	His	Ala	Val	Val	His	Gly	Asn	Leu	Ala	Cys	Val	Tyr	Tyr	
	130					135					140					
Glu	Gln	Gly	Leu	Ile	Asp	Leu	Ala	Ile	Asp	Thr	Tyr	Arg	Arg	Ala	Ile	
145					150				155						160	
Glu	Leu	Gln	Pro	His	Phe	Pro	Asp	Ala	Tyr	Cys	Asn	Leu	Ala	Asn	Ala	
				165					170					175		
Leu	Lys	Glu	Lys	Gly	Ser	Val	Ala	Glu	Ala	Glu	Asp	Cys	Tyr	Asn	Thr	
			180					185					190			
Ala	Leu	Arg	Leu	Cys	Pro	Thr	His	Ala	Asp	Ser	Leu	Asn	Asn	Leu	Ala	
		195					200					205				
Asn	Ile	Lys	Arg	Glu	Gln	Gly	Asn	Ile	Glu	Glu	Ala	Val	Arg	Leu	Tyr	
	210					215					220					
Arg	Lys	Ala	Leu	Glu	Val	Phe	Pro	Glu	Phe	Ala	Ala	Ala	His	Ser	Asn	
225					230					235					240	
Leu	Ala	Ser	Val	Leu	Gln	Gln	Gln	Gly	Lys	Leu	Gln	Glu	Ala	Leu	Met	
			245						250					255		
His	Tyr	Lys	Glu	Ala	Ile	Arg	Ile	Ser	Pro	Thr	Phe	Ala	Asp	Ala	Tyr	
			260					265					270			
Ser	Asn	Met	Gly	Asn	Thr	Leu	Lys	Glu	Met	Gln	Asp	Val	Gln	Gly	Ala	

275					280					285					
Leu	Gln	Cys	Tyr	Thr	Arg	Ala	Ile	Gln	Ile	Asn	Pro	Ala	Phe	Ala	Asp
290						295				300					
Ala	His	Ser	Asn	Leu	Ala	Ser	Ile	His	Lys	Asp	Ser	Gly	Asn	Ile	Pro
305					310					315					320
Glu	Ala	Ile	Ala	Ser	Tyr	Arg	Thr	Ala	Leu	Lys	Leu	Lys	Pro	Asp	Phe
				325					330					335	
Pro	Asp	Ala	Tyr	Cys	Asn	Leu	Ala	His	Cys	Leu	Gln	Ile	Val	Cys	Asp
			340					345					350		
Trp	Thr	Asp	Tyr	Asp	Glu	Arg	Met	Lys	Lys	Leu	Val	Ser	Ile	Val	Ala
		355					360					365			
Asp	Gln	Leu	Glu	Lys	Asn	Arg	Leu	Pro	Ser	Val	His	Pro	His	His	Ser
	370					375					380				
Met	Leu	Tyr	Pro	Leu	Ser	His	Gly	Phe	Arg	Lys	Ala	Ile	Ala	Glu	Arg
385					390					395					400
His	Gly	Asn	Leu	Cys	Leu	Asp	Lys	Ile	Asn	Val	Leu	His	Lys	Pro	Pro
			405					410						415	
Tyr	Glu	His	Pro	Lys	Asp	Leu	Lys	Leu	Ser	Asp	Gly	Arg	Leu	Arg	Val
			420					425					430		
Gly	Tyr	Val	Ser	Ser	Asp	Phe	Gly	Asn	His	Pro	Thr	Ser	His	Leu	Met
		435					440					445			
Gln	Ser	Ile	Pro	Gly	Met	His	Asn	Pro	Asp	Lys	Phe	Glu	Val	Phe	Cys
	450					455					460				
Tyr	Ala	Leu	Ser	Pro	Asp	Asp	Gly	Thr	Asn	Phe	Arg	Val	Lys	Val	Met
465					470					475					480
Ala	Glu	Ala	Asn	His	Phe	Ile	Asp	Leu	Ser	Gln	Ile	Pro	Cys	Asn	Gly
			485					490					495		
Lys	Ala	Ala	Asp	Arg	Ile	His	Gln	Asp	Gly	Ile	His	Ile	Leu	Val	Asn
			500					505					510		
Met	Asn	Gly	Tyr	Thr	Lys	Gly	Ala	Arg	Asn	Glu	Leu	Phe	Ala	Leu	Arg
		515					520					525			
Pro	Ala	Pro	Ile	Gln	Ala	Met	Trp	Leu	Gly	Tyr	Pro	Gly	Thr	Ser	Gly
	530					535					540				
Ala	Leu	Phe	Met	Asp	Tyr	Ile	Ile	Thr	Asp	Gln	Glu	Thr	Ser	Pro	Ala
545					550					555					560

Glu	Val	Ala	Glu	Gln	Tyr	Ser	Glu	Lys	Leu	Ala	Tyr	Met	Pro	His	Thr	
				565					570					575		
Phe	Phe	Ile	Gly	Asp	His	Ala	Asn	Met	Phe	Pro	His	Leu	Lys	Lys	Lys	
			580					585					590			
Ala	Val	Ile	Asp	Phe	Lys	Ser	Asn	Gly	His	Ile	Tyr	Asp	Asn	Arg	Ile	
		595					600					605				
Val	Leu	Asn	Gly	Ile	Asp	Leu	Lys	Ala	Phe	Leu	Asp	Ser	Leu	Pro	Asp	
	610					615					620					
Val	Lys	Ile	Val	Lys	Met	Lys	Cys	Pro	Asp	Gly	Gly	Asp	Asn	Ala	Asp	
625					630					635					640	
Ser	Ser	Asn	Thr	Ala	Leu	Asn	Met	Pro	Val	Ile	Pro	Met	Asn	Thr	Ile	
				645					650					655		
Ala	Glu	Ala	Val	Ile	Glu	Met	Ile	Asn	Arg	Gly	Gln	Ile	Gln	Ile	Thr	
			660					665					670			
Ile	Asn	Gly	Phe	Ser	Ile	Ser	Asn	Gly	Leu	Ala	Thr	Thr	Gln	Ile	Asn	
		675					680					685				
Asn	Lys	Ala	Ala	Thr	Gly	Glu	Glu	Val	Pro	Arg	Thr	Ile	Ile	Val	Thr	
	690					695					700					
Thr	Arg	Ser	Gln	Tyr	Gly	Leu	Pro	Glu	Asp	Ala	Ile	Val	Tyr	Cys	Asn	
705					710					715					720	
Phe	Asn	Gln	Leu	Tyr	Lys	Ile	Asp	Pro	Ser	Thr	Leu	Gln	Met	Trp	Ala	
				725				730						735		
Asn	Ile	Leu	Lys	Arg	Val	Pro	Asn	Ser	Val	Leu	Trp	Leu	Leu	Arg	Phe	
			740					745					750			
Pro	Ala	Val	Gly	Glu	Pro	Asn	Ile	Gln	Gln	Tyr	Ala	Gln	Asn	Met	Gly	
		755					760					765				
Leu	Pro	Gln	Asn	Arg	Ile	Ile	Phe	Ser	Pro	Val	Ala	Pro	Lys	Glu	Glu	
	770					775					780					
His	Val	Arg	Arg	Gly	Gln	Leu	Ala	Asp	Val	Cys	Leu	Asp	Thr	Pro	Leu	
785					790					795					800	
Cys	Asn	Gly	His	Thr	Thr	Gly	Met	Asp	Val	Leu	Trp	Ala	Gly	Thr	Pro	
				805					810					815		
Met	Val	Thr	Met	Pro	Gly	Glu	Thr	Leu	Ala	Ser	Arg	Val	Ala	Ala	Ser	
			820					825					830			
Gln	Leu	Thr	Cys	Leu	Gly	Cys	Leu	Glu	Leu	Ile	Ala	Lys	Asn	Arg	Gln	
		835					840					845				

Glu Tyr Glu Asp Ile Ala Val Lys Leu Gly Thr Asp Leu Glu Tyr Leu
850 855 860

Lys Lys Val Arg Gly Lys Val Trp Lys Gln Arg Ile Ser Ser Pro Leu
865 870 875 880

Phe Asn Thr Lys Gln Tyr Thr Met Glu Leu Glu Arg Leu Tyr Leu Gln
885 890 895

Met Trp Glu His Tyr Ala Ala Gly Asn Lys Pro Asp His Met Ile Lys
900 905 910

Pro Val Glu Val Thr Glu Ser Ala
915 920

<210> 55

<211> 46

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 55

Met Leu Gln Gly His Phe Trp Leu Val Arg Glu Gly Ile Met Ile Ser
1 5 10 15

Pro Ser Ser Pro Pro Pro Asn Leu Phe Phe Ser Leu Tyr Lys Phe
20 25 30

Ser Pro Phe Pro Leu Pro Pro Phe Pro Pro Ile Phe Phe His
35 40 45

<210> 56

<211> 50

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 56

Met Leu Gln Gly His Phe Trp Leu Val Arg Glu Gly Ile Met Ile Ser
1 5 10 15

Pro Ser Ser Pro Pro Pro Asn Leu Phe Phe Phe Pro Phe Thr Asn
20 25 30

Phe Pro Leu Ser Leu Tyr Leu Leu Ser Leu Pro Ser Ser Phe Ile Asn

35

40

45

Pro Ser
50

<210> 57

<211> 350

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 57

Met Glu Ser Gln Val Gly Gly Gly Pro Ala Gly Arg Pro Ala Gln Arg
1 5 10 15

Pro Leu Leu Gly Thr Asn Gly Ala Thr Asp Asp Ser Lys Thr Asn Leu
20 25 30

Ile Val Asn Tyr Leu Pro Gln Asn Met Thr Gln Asp Glu Phe Lys Ser
35 40 45

Leu Phe Gly Ser Ile Gly Asp Ile Glu Ser Cys Lys Leu Val Arg Asp
50 55 60

Lys Ile Thr Gly Gln Ser Leu Gly Tyr Gly Phe Val Asn Tyr Ser Asp
65 70 75 80

Pro Asn Asp Ala Asp Lys Ala Ile Asn Thr Leu Asn Gly Leu Lys Leu
85 90 95

Gln Thr Lys Thr Ile Lys Val Ser Tyr Ala Arg Pro Ser Ser Ala Ser
100 105 110

Ile Arg Asp Ala Asn Leu Tyr Val Ser Gly Leu Pro Lys Thr Met Ser
115 120 125

Gln Lys Glu Met Glu Gln Leu Phe Ser Gln Tyr Gly Arg Ile Ile Thr
130 135 140

Ser Arg Ile Leu Val Asp Gln Val Thr Gly Val Ser Arg Gly Val Gly
145 150 155 160

Phe Ile Arg Phe Asp Lys Arg Ile Glu Ala Glu Glu Ala Ile Lys Gly
165 170 175

Leu Asn Gly Gln Lys Pro Leu Gly Ala Arg Glu Pro Ile Thr Val Lys
180 185 190

Phe Ala Asn Asn Pro Ser Gln Lys Thr Gly Gln Ala Leu Leu Thr His
195 200 205

Leu	Tyr	Gln	Ser	Ser	Ala	Arg	Arg	Tyr	Ala	Gly	Pro	Leu	His	His	Gln
210						215					220				
Thr	Gln	Arg	Phe	Arg	Leu	Asp	Asn	Leu	Leu	Asn	Met	Ala	Tyr	Ala	Val
225					230					235					240
Lys	Arg	Phe	Ser	Pro	Ile	Ala	Ile	Asp	Gly	Met	Ser	Gly	Leu	Ala	Gly
				245					250					255	
Val	Gly	Leu	Ser	Gly	Gly	Ala	Ala	Gly	Gly	Trp	Cys	Ile	Phe	Val	Tyr
			260					265					270		
Asn	Leu	Ser	Pro	Glu	Pro	Asp	Gln	Ser	Val	Leu	Trp	Gln	Leu	Phe	Gly
		275					280					285			
Pro	Phe	Gly	Ala	Val	Thr	Asn	Val	Lys	Val	Ile	Arg	Asp	Phe	Thr	Thr
	290					295					300				
Asn	Lys	Cys	Lys	Gly	Phe	Gly	Phe	Met	Thr	Met	Thr	Asn	Tyr	Asp	Glu
305					310					315					320
Ala	Ala	Met	Ala	Ile	Ala	Ser	Leu	Asn	Gly	Tyr	Arg	Leu	Gly	Gln	Arg
				325					330					335	
Val	Leu	Gln	Val	Ser	Phe	Lys	Thr	Ser	Lys	Gln	His	Lys	Ala		
			340					345					350		

<210> 58
 <211> 40
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 58															
Met	Glu	Ser	Gln	Val	Gly	Gly	Ala	Arg	Pro	Ala	Gly	Leu	Pro	Asn	Gly
1				5					10					15	
His	Ser	Leu	Val	Gln	Met	Glu	Pro	Leu	Thr	Thr	Ala	Arg	Pro	Thr	Ser
			20					25					30		
Ser	Ser	Thr	Thr	Cys	Pro	Arg	Thr								
		35				40									

<210> 59
 <211> 25
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 59

Met Glu Ser Gln Val Gly Gly Gly Pro Gly Arg Pro Ala Cys Pro Thr
1 5 10 15

Ala Thr Pro Trp Tyr Lys Trp Ser His
20 25

<210> 60

<211> 189

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 60

Leu Phe Ser His Gln Arg Val Gln Ala Gln Pro Thr Asp Tyr Gly Gly
1 5 10 15

Ser Phe Thr Arg Arg Cys Val Glu Trp Leu Leu Gly Leu Tyr Phe Leu
20 25 30

Ser His Ile Pro Ile Thr Leu Phe Met Asp Leu Gln Ala Val Val Pro
35 40 45

Arg Glu Leu Tyr Pro Val Glu Phe Arg Asn Leu Leu Lys Trp Tyr Ala
50 55 60

Lys Glu Phe Lys Asp Pro Leu Leu Gln Glu Pro Pro Ala Trp Phe Lys
65 70 75 80

Ser Phe Leu Phe Cys Glu Leu Val Phe Gln Leu Pro Phe Phe Pro Ile
85 90 95

Ala Thr Tyr Ala Phe Leu Lys Gly Ser Cys Lys Trp Ile Arg Thr Pro
100 105 110

Ala Ile Ile Tyr Ser Val His Thr Met Thr Thr Leu Ile Leu Ile Leu
115 120 125

Ser Thr Phe Leu Phe Glu Asp Phe Ser Lys Ala Ser Gly Phe Lys Gly
130 135 140

Gln Arg Pro Glu Thr Leu His Glu Arg Leu Thr Leu Val Ser Val Tyr
145 150 155 160

Ala Pro Tyr Leu Leu Ile Pro Phe Ile Leu Leu Ile Phe Met Leu Arg
165 170 175

Ser Pro Tyr Tyr Lys Tyr Glu Glu Lys Arg Lys Lys Lys
180 185

<210> 61

<211> 251

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 61

Leu Phe Ser His Gln Arg Val Gln Ala Gln Pro Thr Asp Tyr Gly Gly
1 5 10 15

Ser Phe Thr Arg Arg Cys Val Glu Trp Leu Leu Gly Leu Tyr Phe Leu
20 25 30

Ser His Ile Pro Ile Thr Leu Phe Met Asp Leu Gln Ala Val Val Pro
35 40 45

Arg Glu Leu Tyr Pro Val Glu Phe Arg Asn Leu Leu Lys Trp Tyr Ala
50 55 60

Lys Glu Phe Lys Asp Pro Leu Leu Gln Glu Pro Pro Ala Trp Phe Lys
65 70 75 80

Ser Phe Leu Phe Cys Glu Leu Val Phe Gln Leu Pro Phe Phe Pro Ile
85 90 95

Ala Thr Tyr Ala Phe Leu Lys Gly Ser Cys Lys Trp Ile Arg Thr Pro
100 105 110

Ala Ile Ile Tyr Ser Val His Thr Met Thr Thr Leu Ile Leu Ile Leu
115 120 125

Ser Thr Phe Leu Phe Glu Asp Phe Ser Lys Ala Ser Gly Phe Lys Gly
130 135 140

Gln Arg Pro Glu Thr Leu His Glu Arg Leu Thr Leu Val Ser Val Tyr
145 150 155 160

Ala Pro Tyr Leu Leu Ile Pro Phe Ile Leu Leu Ile Phe Met Leu Arg
165 170 175

Ser Pro Tyr Tyr Lys Tyr Glu Glu Lys Arg Lys Lys Asn Glu Gly Asn
180 185 190

Asn His Trp Pro Arg Val Glu Met Pro Thr Gly Trp Leu Leu Val Gly
195 200 205

Tyr Ile Gln Glu His Cys Ser Glu Pro Thr Ser Ser Ala Ala Phe Glu
 210 215 220

Thr Leu Ala Ala Met His Lys Ser Lys Met Val Ser Gly Thr Met Ser
 225 230 235 240

Asn Pro His Leu Leu Pro Phe Phe Phe Phe Phe
 245 250

<210> 62

<211> 198

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 62

Leu Phe Ser His Gln Arg Val Gln Ala Gln Pro Thr Asp Tyr Gly Gly
 1 5 10 15

Ser Phe Thr Arg Arg Cys Val Glu Trp Leu Leu Gly Leu Tyr Phe Leu
 20 25 30

Ser His Ile Pro Ile Thr Leu Phe Met Asp Leu Gln Ala Val Val Pro
 35 40 45

Arg Glu Leu Tyr Pro Val Glu Phe Arg Asn Leu Leu Lys Trp Tyr Ala
 50 55 60

Lys Glu Phe Lys Asp Pro Leu Leu Gln Glu Pro Pro Ala Trp Phe Lys
 65 70 75 80

Ser Phe Leu Phe Cys Glu Leu Val Phe Gln Leu Pro Phe Phe Pro Ile
 85 90 95

Ala Thr Tyr Ala Phe Leu Lys Gly Ser Cys Lys Trp Ile Arg Thr Pro
 100 105 110

Ala Ile Ile Tyr Ser Val His Thr Met Thr Thr Leu Ile Leu Ile Leu
 115 120 125

Ser Thr Phe Leu Phe Glu Asp Phe Ser Lys Ala Ser Gly Phe Lys Gly
 130 135 140

Gln Arg Pro Glu Thr Leu His Glu Arg Leu Thr Leu Val Ser Val Tyr
 145 150 155 160

Ala Pro Tyr Leu Leu Ile Pro Phe Ile Leu Leu Ile Phe Met Leu Arg
 165 170 175

Ser Pro Tyr Tyr Lys Tyr Glu Glu Lys Arg Lys Lys Lys Met Lys Glu

180

185

190

Thr Thr Thr Gly Pro Gly
195

<210> 63

<211> 1232

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 63

Met Ala Asn Gly Val Ile Pro Pro Pro Gly Gly Ala Ser Pro Leu Pro
1 5 10 15

Gln Val Arg Val Pro Leu Glu Glu Pro Pro Leu Ser Pro Asp Val Glu
20 25 30

Glu Glu Asp Asp Asp Leu Gly Lys Thr Leu Ala Val Ser Arg Phe Gly
35 40 45

Asp Leu Ile Ser Lys Pro Pro Ala Trp Asp Pro Glu Lys Pro Ser Arg
50 55 60

Ser Tyr Ser Glu Arg Asp Phe Glu Phe His Arg His Thr Ser His His
65 70 75 80

Thr His His Pro Leu Ser Ala Arg Leu Pro Pro Pro His Lys Leu Arg
85 90 95

Arg Leu Pro Pro Thr Ser Ala Arg His Thr Arg Arg Lys Arg Lys Lys
100 105 110

Glu Lys Thr Ser Ala Pro Pro Ser Glu Gly Thr Pro Pro Ile Gln Glu
115 120 125

Glu Gly Gly Ala Gly Val Asp Glu Glu Glu Glu Glu Glu Glu Glu
130 135 140

Glu Gly Glu Ser Glu Ala Glu Pro Val Glu Pro Pro Pro Ser Gly Thr
145 150 155 160

Pro Gln Lys Ala Lys Phe Ser Ile Gly Ser Asp Glu Asp Asp Ser Pro
165 170 175

Gly Leu Pro Gly Arg Ala Ala Val Thr Lys Pro Leu Pro Ser Val Gly
180 185 190

Pro His Thr Asp Lys Ser Pro Gln His Ser Ser Ser Ser Pro Ser Pro
195 200 205

Arg	Ala	Arg	Ala	Ser	Arg	Leu	Ala	Gly	Glu	Lys	Ser	Arg	Pro	Trp	Ser		
210						215					220						
Pro	Ser	Ala	Ser	Tyr	Asp	Leu	Arg	Glu	Arg	Leu	Cys	Pro	Gly	Ser	Ala		
225					230					235					240		
Leu	Gly	Asn	Pro	Gly	Gly	Pro	Glu	Gln	Gln	Val	Pro	Thr	Asp	Glu	Ala		
				245					250					255			
Glu	Ala	Gln	Met	Leu	Gly	Ser	Ala	Asp	Leu	Asp	Asp	Met	Lys	Ser	His		
			260					265					270				
Arg	Leu	Glu	Asp	Asn	Pro	Gly	Val	Arg	Arg	His	Leu	Val	Lys	Lys	Pro		
	275						280					285					
Ser	Arg	Thr	Gln	Gly	Gly	Arg	Gly	Ser	Pro	Ser	Gly	Leu	Ala	Pro	Ile		
	290					295					300						
Leu	Arg	Arg	Lys	Lys	Lys	Lys	Lys	Lys	Leu	Asp	Arg	Arg	Pro	His	Glu		
305					310					315					320		
Val	Phe	Val	Glu	Leu	Asn	Glu	Leu	Met	Leu	Asp	Arg	Ser	Gln	Glu	Pro		
				325					330					335			
His	Trp	Arg	Glu	Thr	Ala	Arg	Trp	Ile	Lys	Phe	Glu	Glu	Asp	Val	Glu		
			340					345					350				
Glu	Glu	Thr	Glu	Arg	Trp	Gly	Lys	Pro	His	Val	Ala	Ser	Leu	Ser	Phe		
		355					360					365					
Arg	Ser	Leu	Leu	Glu	Leu	Arg	Arg	Thr	Ile	Ala	His	Gly	Ala	Ala	Leu		
	370					375					380						
Leu	Asp	Leu	Glu	Gln	Thr	Thr	Leu	Pro	Gly	Ile	Ala	His	Leu	Val	Val		
385					390					395					400		
Glu	Thr	Met	Ile	Val	Ser	Asp	Gln	Ile	Arg	Pro	Glu	Asp	Arg	Ala	Ser		
				405					410					415			
Val	Leu	Arg	Thr	Leu	Leu	Leu	Lys	His	Ser	His	Pro	Asn	Asp	Asp	Lys		
			420					425					430				
Asp	Ser	Gly	Phe	Phe	Pro	Arg	Asn	Pro	Ser	Ser	Ser	Ser	Met	Asn	Ser		
		435					440					445					
Val	Leu	Gly	Asn	His	His	Pro	Thr	Pro	Ser	His	Gly	Pro	Asp	Gly	Ala		
	450					455					460						
Val	Pro	Thr	Met	Ala	Asp	Asp	Leu	Gly	Glu	Pro	Ala	Pro	Leu	Trp	Pro		
465					470					475					480		
His	Asp	Pro	Asp	Ala	Lys	Glu	Lys	Pro	Leu	His	Met	Pro	Gly	Gly	Asp		

485						490						495						
Gly	His	Arg	Gly	Lys	Ser	Leu	Lys	Leu	Leu	Glu	Lys	Ile	Pro	Glu	Asp			
			500					505					510					
Ala	Glu	Ala	Thr	Val	Val	Leu	Val	Gly	Cys	Val	Pro	Phe	Leu	Glu	Gln			
		515					520					525						
Pro	Ala	Ala	Ala	Phe	Val	Arg	Leu	Asn	Glu	Ala	Val	Leu	Leu	Glu	Ser			
	530					535					540							
Val	Leu	Glu	Val	Pro	Val	Pro	Val	Arg	Phe	Leu	Phe	Val	Met	Leu	Gly			
545					550					555					560			
Pro	Ser	His	Thr	Ser	Thr	Asp	Tyr	His	Glu	Leu	Gly	Arg	Ser	Ile	Ala			
				565					570					575				
Thr	Leu	Met	Ser	Asp	Lys	Leu	Phe	His	Glu	Ala	Ala	Tyr	Gln	Ala	Asp			
			580					585					590					
Asp	Arg	Gln	Asp	Leu	Leu	Ser	Ala	Ile	Ser	Glu	Phe	Leu	Asp	Gly	Ser			
		595					600					605						
Ile	Val	Ile	Pro	Pro	Ser	Glu	Val	Glu	Gly	Arg	Asp	Leu	Leu	Arg	Ser			
	610					615					620							
Val	Ala	Ala	Phe	Gln	Arg	Glu	Leu	Leu	Arg	Lys	Arg	Arg	Glu	Arg	Glu			
625					630					635					640			
Gln	Thr	Lys	Val	Glu	Met	Thr	Thr	Arg	Gly	Gly	Tyr	Thr	Ala	Pro	Gly			
			645						650					655				
Lys	Glu	Leu	Ser	Leu	Glu	Leu	Gly	Gly	Ser	Glu	Ala	Thr	Pro	Glu	Asp			
			660				665						670					
Asp	Pro	Leu	Leu	Arg	Thr	Gly	Ser	Val	Phe	Gly	Gly	Leu	Val	Arg	Asp			
	675					680						685						
Val	Arg	Arg	Arg	Tyr	Pro	His	Tyr	Pro	Ser	Asp	Leu	Arg	Asp	Ala	Leu			
	690					695					700							
His	Ser	Gln	Cys	Val	Ala	Ala	Val	Leu	Phe	Ile	Tyr	Phe	Ala	Ala	Leu			
705					710					715					720			
Ser	Pro	Ala	Ile	Thr	Phe	Gly	Gly	Leu	Leu	Gly	Glu	Lys	Thr	Glu	Gly			
			725					730						735				
Leu	Met	Gly	Val	Ser	Glu	Leu	Ile	Val	Ser	Thr	Ala	Val	Leu	Gly	Val			
			740					745					750					
Leu	Phe	Ser	Leu	Leu	Gly	Ala	Gln	Pro	Leu	Leu	Val	Val	Gly	Phe	Ser			
	755					760						765						

Gly	Pro	Leu	Leu	Val	Phe	Glu	Glu	Ala	Phe	Phe	Lys	Phe	Cys	Arg	Ala		
770						775					780						
Gln	Asp	Leu	Glu	Tyr	Leu	Thr	Gly	Arg	Val	Trp	Val	Gly	Leu	Trp	Leu		
785					790					795					800		
Val	Val	Phe	Val	Leu	Ala	Leu	Val	Ala	Ala	Glu	Gly	Ser	Phe	Leu	Val		
				805					810					815			
Arg	Tyr	Ile	Ser	Pro	Phe	Thr	Gln	Glu	Ile	Phe	Ala	Phe	Leu	Ile	Ser		
			820					825					830				
Leu	Ile	Phe	Ile	Tyr	Glu	Thr	Phe	Tyr	Lys	Leu	Tyr	Lys	Val	Phe	Thr		
	835						840					845					
Glu	His	Pro	Leu	Leu	Pro	Phe	Tyr	Pro	Pro	Glu	Gly	Ala	Leu	Glu	Gly		
850						855					860						
Ser	Leu	Ala	Ala	Gly	Leu	Glu	Pro	Asn	Gly	Ser	Ala	Leu	Pro	Pro	Thr		
865					870					875					880		
Glu	Gly	Pro	Pro	Ser	Pro	Arg	Asn	Gln	Pro	Asn	Thr	Ala	Leu	Leu	Ser		
				885					890					895			
Leu	Ile	Leu	Met	Leu	Gly	Thr	Phe	Phe	Ile	Ala	Phe	Phe	Leu	Arg	Lys		
			900					905						910			
Phe	Arg	Asn	Ser	Arg	Phe	Leu	Gly	Gly	Lys	Ala	Arg	Arg	Ile	Ile	Gly		
		915					920					925					
Asp	Phe	Gly	Ile	Pro	Ile	Ser	Ile	Leu	Val	Met	Val	Leu	Val	Asp	Tyr		
930						935					940						
Ser	Ile	Thr	Asp	Thr	Tyr	Thr	Gln	Lys	Leu	Thr	Val	Pro	Thr	Gly	Leu		
945					950					955					960		
Ser	Val	Thr	Ser	Pro	Asp	Lys	Arg	Ser	Trp	Phe	Ile	Pro	Pro	Leu	Gly		
				965					970					975			
Ser	Ala	Arg	Pro	Phe	Pro	Pro	Trp	Met	Met	Val	Ala	Ala	Ala	Val	Pro		
			980					985					990				
Ala	Leu	Leu	Val	Leu	Ile	Leu	Ile	Phe	Met	Glu	Thr	Gln	Ile	Thr	Ala		
	995					1000						1005					
Leu	Ile	Val	Ser	Gln	Lys	Ala	Arg	Arg	Leu	Leu	Lys	Gly	Ser	Gly	Phe		
1010					1015						1020						
His	Leu	Asp	Leu	Leu	Leu	Ile	Gly	Ser	Leu	Gly	Gly	Leu	Cys	Gly	Leu		
1025				1030						1035					1040		
Phe	Gly	Leu	Pro	Trp	Leu	Thr	Ala	Ala	Thr	Val	Arg	Ser	Val	Thr	His		
			1045					1050						1055			

Val	Asn	Ala	Leu	Thr	Val	Met	Arg	Thr	Ala	Ile	Ala	Pro	Gly	Asp	Lys
	1060						1065						1070		
Pro	Gln	Ile	Gln	Glu	Val	Arg	Glu	Gln	Arg	Val	Thr	Gly	Val	Leu	Ile
	1075						1080					1085			
Ala	Ser	Leu	Val	Gly	Leu	Ser	Ile	Val	Met	Gly	Ala	Val	Leu	Arg	Arg
	1090					1095					1100				
Ile	Pro	Leu	Ala	Val	Leu	Phe	Gly	Ile	Phe	Leu	Tyr	Met	Gly	Val	Thr
1105					1110				1115					1120	
Ser	Leu	Ser	Gly	Ile	Gln	Leu	Ser	Gln	Arg	Leu	Leu	Leu	Ile	Leu	Met
			1125					1130						1135	
Pro	Ala	Lys	His	His	Pro	Glu	Gln	Pro	Tyr	Val	Thr	Lys	Val	Lys	Thr
		1140					1145						1150		
Trp	Arg	Met	His	Leu	Phe	Thr	Cys	Ile	Gln	Leu	Gly	Cys	Ile	Ala	Leu
	1155					1160						1165			
Leu	Trp	Val	Val	Lys	Ser	Thr	Ala	Ala	Ser	Leu	Ala	Phe	Pro	Phe	Leu
	1170					1175					1180				
Leu	Leu	Leu	Thr	Val	Pro	Leu	Arg	His	Cys	Leu	Leu	Pro	Arg	Leu	Phe
1185					1190					1195				1200	
Gln	Asp	Arg	Glu	Leu	Gln	Ala	Leu	Asp	Ser	Glu	Asp	Ala	Glu	Pro	Asn
			1205						1210					1215	
Phe	Asp	Glu	Asp	Gly	Gln	Asp	Glu	Tyr	Asn	Glu	Leu	His	Met	Pro	Val
		1220					1225						1230		

<210> 64
 <211> 268
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 64
 Met Ala Asn Gly Val Ile Pro Pro Pro Gly Gly Ala Ser Pro Leu Pro
 1 5 10 15
 Gln Val Arg Val Pro Leu Glu Glu Pro Pro Leu Ser Pro Asp Val Glu
 20 25 30

<400> 65

Met Ala Asn Gly Val Ile Pro Pro Pro Gly Gly Ala Ser Pro Leu Pro
1 5 10 15

Gln Val Arg Val Pro Leu Glu Glu Pro Pro Leu Ser Pro Asp Val Glu
20 25 30

Glu Glu Asp Asp Asp Leu Gly Lys Thr Leu Ala Val Ser Arg Phe Gly
35 40 45

Asp Leu Ile Ser Lys Pro Pro Ala Trp Asp Pro Glu Lys Pro Ser Arg
50 55 60

Ser Tyr Ser Glu Arg Asp Phe Glu Phe His Arg His Thr Ser His His
65 70 75 80

Thr His His Pro Leu Ser Ala Arg Leu Pro Pro Pro His Lys Leu Arg
85 90 95

Arg Leu Pro Pro Thr Ser Ala Arg His Thr Arg Arg Lys Arg Lys Lys
100 105 110

Glu Lys Thr Ser Ala Pro Pro Ser Glu Gly Thr Pro Pro Ile Gln Glu
115 120 125

Glu Gly Gly Ala Gly Val Asp Glu Glu Glu Glu Glu Glu Glu Glu
130 135 140

Glu Gly Glu Ser Glu Ala Glu Pro Val Glu Pro Pro Pro Leu Arg Asp
145 150 155 160

Pro Thr Glu Gly Lys Val Leu His Trp Lys
165 170

<210> 66

<211> 686

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 66

Met Ala Gly Ser Gly Ala Gly Val Arg Cys Ser Leu Leu Arg Leu Gln
1 5 10 15

Glu Thr Leu Ser Ala Ala Asp Arg Cys Gly Ala Ala Leu Ala Gly His
20 25 30

Gln Leu Ile Arg Gly Leu Gly Gln Glu Cys Val Leu Ser Ser Ser Pro
35 40 45

Ala	Val	Leu	Ala	Leu	Gln	Thr	Ser	Leu	Val	Phe	Ser	Arg	Asp	Phe	Gly	
50						55					60					
Leu	Leu	Val	Phe	Val	Arg	Lys	Ser	Leu	Asn	Ser	Ile	Glu	Phe	Arg	Glu	
65					70					75					80	
Cys	Arg	Glu	Glu	Ile	Leu	Lys	Phe	Leu	Cys	Ile	Phe	Leu	Glu	Lys	Met	
				85					90					95		
Gly	Gln	Lys	Ile	Ala	Pro	Tyr	Ser	Val	Glu	Ile	Lys	Asn	Thr	Cys	Thr	
			100					105					110			
Ser	Val	Tyr	Thr	Lys	Asp	Arg	Ala	Ala	Lys	Cys	Lys	Ile	Pro	Ala	Leu	
		115					120					125				
Asp	Leu	Leu	Ile	Lys	Leu	Leu	Gln	Thr	Phe	Arg	Ser	Ser	Arg	Leu	Met	
	130					135					140					
Asp	Glu	Phe	Lys	Ile	Gly	Glu	Leu	Phe	Ser	Lys	Phe	Tyr	Gly	Glu	Leu	
145					150					155					160	
Ala	Leu	Lys	Lys	Lys	Ile	Pro	Asp	Thr	Val	Leu	Glu	Lys	Val	Tyr	Glu	
				165					170					175		
Leu	Leu	Gly	Leu	Leu	Gly	Glu	Val	His	Pro	Ser	Glu	Met	Ile	Asn	Asn	
			180					185					190			
Ala	Glu	Asn	Leu	Phe	Arg	Ala	Phe	Leu	Gly	Glu	Leu	Lys	Thr	Gln	Met	
		195					200					205				
Thr	Ser	Ala	Val	Arg	Glu	Pro	Lys	Leu	Pro	Val	Leu	Ala	Gly	Cys	Leu	
	210					215					220					
Lys	Gly	Leu	Ser	Ser	Leu	Leu	Cys	Asn	Phe	Thr	Lys	Ser	Met	Glu	Glu	
225					230					235					240	
Asp	Pro	Gln	Thr	Ser	Arg	Glu	Ile	Phe	Asn	Phe	Val	Leu	Lys	Ala	Ile	
				245					250					255		
Arg	Pro	Gln	Ile	Asp	Leu	Lys	Arg	Tyr	Ala	Val	Pro	Ser	Ala	Gly	Leu	
			260					265					270			
Arg	Leu	Phe	Ala	Leu	His	Ala	Ser	Gln	Phe	Ser	Thr	Cys	Leu	Leu	Asp	
		275					280					285				
Asn	Tyr	Val	Ser	Leu	Phe	Glu	Val	Leu	Leu	Lys	Trp	Cys	Ala	His	Thr	
	290					295					300					
Asn	Val	Glu	Leu	Lys	Lys	Ala	Ala	Leu	Ser	Ala	Leu	Glu	Ser	Phe	Leu	
305					310					315					320	
Lys	Gln	Val	Ser	Asn	Met	Val	Ala	Lys	Asn	Ala	Glu	Met	His	Lys	Asn	
				325					330					335		

Lys	Leu	Gln	Tyr	Phe	Met	Glu	Gln	Phe	Tyr	Gly	Ile	Ile	Arg	Asn	Val		
			340					345					350				
Asp	Ser	Asn	Asn	Lys	Glu	Leu	Ser	Ile	Ala	Ile	Arg	Gly	Tyr	Gly	Leu		
		355					360					365					
Phe	Ala	Gly	Pro	Cys	Lys	Val	Ile	Asn	Ala	Lys	Asp	Val	Asp	Phe	Met		
	370					375					380						
Tyr	Val	Glu	Leu	Ile	Gln	Arg	Cys	Lys	Gln	Met	Phe	Leu	Thr	Gln	Thr		
385					390					395					400		
Asp	Thr	Gly	Asp	Asp	Arg	Val	Tyr	Gln	Met	Pro	Ser	Phe	Leu	Gln	Ser		
			405					410						415			
Val	Ala	Ser	Val	Leu	Leu	Tyr	Leu	Asp	Thr	Val	Pro	Glu	Val	Tyr	Thr		
			420					425					430				
Pro	Val	Leu	Glu	His	Leu	Val	Val	Met	Gln	Ile	Asp	Ser	Phe	Pro	Gln		
	435						440					445					
Tyr	Ser	Pro	Lys	Met	Gln	Leu	Val	Cys	Cys	Arg	Ala	Ile	Val	Lys	Val		
	450					455					460						
Phe	Leu	Ala	Leu	Ala	Ala	Lys	Gly	Pro	Val	Leu	Arg	Asn	Cys	Ile	Ser		
465					470					475					480		
Thr	Val	Val	His	Gln	Gly	Leu	Ile	Arg	Ile	Cys	Ser	Lys	Pro	Val	Val		
			485					490						495			
Leu	Pro	Lys	Gly	Pro	Glu	Ser	Glu	Ser	Glu	Asp	His	Arg	Ala	Ser	Gly		
			500					505					510				
Glu	Val	Arg	Thr	Gly	Lys	Trp	Lys	Val	Pro	Thr	Tyr	Lys	Asp	Tyr	Val		
	515						520					525					
Asp	Leu	Phe	Arg	His	Leu	Leu	Ser	Ser	Asp	Gln	Met	Met	Asp	Ser	Ile		
	530					535					540						
Leu	Ala	Asp	Glu	Ala	Phe	Phe	Ser	Val	Asn	Ser	Ser	Ser	Glu	Ser	Leu		
545					550					555					560		
Asn	His	Leu	Leu	Tyr	Asp	Glu	Phe	Val	Lys	Ser	Val	Leu	Lys	Ile	Val		
				565					570					575			
Glu	Lys	Leu	Asp	Leu	Thr	Leu	Glu	Ile	Gln	Thr	Val	Gly	Glu	Gln	Glu		
			580					585					590				
Asn	Gly	Asp	Glu	Ala	Pro	Gly	Val	Trp	Met	Ile	Pro	Thr	Ser	Asp	Pro		
		595					600					605					
Ala	Ala	Asn	Leu	His	Pro	Ala	Lys	Pro	Lys	Asp	Phe	Ser	Ala	Phe	Ile		
	610					615					620						

Asn Leu Val Glu Phe Cys Arg Glu Ile Leu Pro Glu Lys Gln Ala Glu
625 630 635 640

Phe Phe Glu Pro Trp Val Tyr Ser Phe Ser Tyr Glu Leu Ile Leu Gln
645 650 655

Ser Thr Arg Leu Pro Leu Ile Ser Gly Phe Tyr Lys Leu Leu Ser Ile
660 665 670

Thr Val Arg Asn Ala Lys Lys Ile Lys Tyr Phe Glu Gly Ser
675 680 685

<210> 67

<211> 170

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 67

Met Ala Gly Ser Gly Ala Gly Val Arg Cys Ser Leu Leu Arg Leu Gln
1 5 10 15

Glu Thr Leu Ser Ala Ala Asp Arg Cys Gly Ala Ala Leu Ala Gly His
20 25 30

Gln Leu Ile Arg Gly Leu Gly Gln Glu Cys Val Leu Ser Ser Ser Pro
35 40 45

Ala Val Leu Ala Leu Gln Thr Ser Leu Val Phe Ser Arg Asp Phe Gly
50 55 60

Leu Leu Val Phe Val Arg Lys Ser Leu Asn Ser Ile Glu Phe Arg Glu
65 70 75 80

Cys Arg Glu Glu Ile Leu Lys Phe Leu Cys Ile Phe Leu Glu Lys Met
85 90 95

Gly Gln Lys Ile Ala Pro Tyr Ser Val Glu Ile Lys Asn Thr Cys Thr
100 105 110

Ser Val Tyr Thr Lys Asp Arg Ala Ala Lys Cys Lys Ile Pro Ala Leu
115 120 125

Asp Leu Leu Ile Lys Leu Leu Gln Thr Phe Arg Ser Ser Arg Leu Met
130 135 140

Asp Glu Phe Lys Ile Gly Glu Leu Phe Ser Lys Phe Tyr Gly Glu Leu
145 150 155 160

Ala Leu Lys Lys Lys Tyr Gln Ile Gln Phe
165 170

<210> 68

<211> 175

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 68

Met Ala Gly Ser Gly Ala Gly Val Arg Cys Ser Leu Leu Arg Leu Gln
1 5 10 15

Glu Thr Leu Ser Ala Ala Asp Arg Cys Gly Ala Ala Leu Ala Gly His
20 25 30

Gln Leu Ile Arg Gly Leu Gly Gln Glu Cys Val Leu Ser Ser Ser Pro
35 40 45

Ala Val Leu Ala Leu Gln Thr Ser Leu Val Phe Ser Arg Asp Phe Gly
50 55 60

Leu Leu Val Phe Val Arg Lys Ser Leu Asn Ser Ile Glu Phe Arg Glu
65 70 75 80

Cys Arg Glu Glu Ile Leu Lys Phe Leu Cys Ile Phe Leu Glu Lys Met
85 90 95

Gly Gln Lys Ile Ala Pro Tyr Ser Val Glu Ile Lys Asn Thr Cys Thr
100 105 110

Ser Val Tyr Thr Lys Asp Arg Ala Ala Lys Cys Lys Ile Pro Ala Leu
115 120 125

Asp Leu Leu Ile Lys Leu Leu Gln Thr Phe Arg Ser Ser Arg Leu Met
130 135 140

Asp Glu Phe Lys Ile Gly Glu Leu Phe Ser Lys Phe Tyr Gly Glu Leu
145 150 155 160

Ala Leu Lys Lys Lys Asn Thr Arg Tyr Ser Phe Arg Lys Ser Ile
165 170 175

<210> 69

<211> 648

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 69

Met	Ser	Ala	Ser	Ala	Ser	Val	Gly	Gly	Pro	Val	Pro	Gln	Pro	Pro	Pro	
1				5					10					15		
Gly	Pro	Ala	Ala	Ala	Leu	Pro	Pro	Gly	Ser	Ala	Ala	Arg	Ala	Leu	His	
			20					25					30			
Val	Glu	Leu	Pro	Ser	Gln	Gln	Arg	Arg	Leu	Arg	His	Leu	Arg	Asn	Ile	
		35					40					45				
Ala	Ala	Arg	Asn	Ile	Val	Asn	Arg	Asn	Gly	His	Gln	Leu	Leu	Asp	Thr	
		50				55					60					
Tyr	Phe	Thr	Leu	His	Leu	Cys	Ser	Thr	Glu	Lys	Ile	Tyr	Lys	Glu	Phe	
65					70					75					80	
Tyr	Arg	Ser	Glu	Val	Ile	Lys	Asn	Ser	Leu	Asn	Pro	Thr	Trp	Arg	Ser	
				85					90					95		
Leu	Asp	Phe	Gly	Ile	Met	Pro	Asp	Arg	Leu	Asp	Thr	Ser	Val	Ser	Cys	
			100					105					110			
Phe	Val	Val	Lys	Ile	Trp	Gly	Gly	Lys	Glu	Asn	Ile	Tyr	Gln	Leu	Leu	
		115					120					125				
Ile	Glu	Trp	Lys	Val	Cys	Leu	Asp	Gly	Leu	Lys	Tyr	Leu	Gly	Gln	Gln	
		130				135					140					
Ile	His	Ala	Arg	Asn	Gln	Asn	Glu	Ile	Ile	Phe	Gly	Leu	Asn	Asp	Gly	
145				150						155					160	
Tyr	Tyr	Gly	Ala	Pro	Phe	Glu	His	Lys	Gly	Tyr	Ser	Asn	Ala	Gln	Lys	
			165						170					175		
Thr	Ile	Leu	Leu	Gln	Val	Asp	Gln	Asn	Cys	Val	Arg	Asn	Ser	Tyr	Asp	
		180					185						190			
Val	Phe	Ser	Leu	Leu	Arg	Leu	His	Arg	Ala	Gln	Cys	Ala	Ile	Lys	Gln	
		195				200						205				
Thr	Gln	Val	Thr	Val	Gln	Lys	Ile	Gly	Lys	Glu	Ile	Glu	Glu	Lys	Leu	
	210					215					220					
Arg	Leu	Thr	Ser	Thr	Ser	Asn	Glu	Leu	Lys	Lys	Lys	Ser	Glu	Cys	Leu	
225					230					235					240	
Gln	Leu	Lys	Ile	Leu	Val	Leu	Gln	Asn	Glu	Leu	Glu	Arg	Gln	Lys	Lys	
			245					250						255		
Ala	Leu	Gly	Arg	Glu	Val	Ala	Leu	Leu	His	Lys	Gln	Gln	Ile	Ala	Leu	

260					265					270					
Gln	Asp	Lys	Gly	Ser	Ala	Phe	Ser	Ala	Glu	His	Leu	Lys	Leu	Gln	Leu
	275						280					285			
Gln	Lys	Glu	Ser	Leu	Asn	Glu	Leu	Arg	Lys	Glu	Cys	Thr	Ala	Lys	Arg
	290					295					300				
Glu	Leu	Phe	Leu	Lys	Thr	Asn	Ala	Gln	Leu	Thr	Ile	Arg	Cys	Arg	Gln
305						310					315				320
Leu	Leu	Ser	Glu	Leu	Ser	Tyr	Ile	Tyr	Pro	Ile	Asp	Leu	Asn	Glu	His
				325					330					335	
Lys	Asp	Tyr	Phe	Val	Cys	Gly	Val	Lys	Leu	Pro	Asn	Ser	Glu	Asp	Phe
			340					345					350		
Gln	Ala	Lys	Asp	Asp	Gly	Ser	Ile	Ala	Val	Ala	Leu	Gly	Tyr	Thr	Ala
		355					360					365			
His	Leu	Val	Ser	Met	Ile	Ser	Phe	Phe	Leu	Gln	Val	Pro	Leu	Arg	Tyr
	370					375					380				
Pro	Ile	Ile	His	Lys	Gly	Ser	Arg	Ser	Thr	Ile	Lys	Asp	Asn	Ile	Asn
385						390					395				400
Asp	Lys	Leu	Thr	Glu	Lys	Glu	Arg	Glu	Phe	Pro	Leu	Tyr	Pro	Lys	Gly
				405					410					415	
Gly	Glu	Lys	Leu	Gln	Phe	Asp	Tyr	Gly	Val	Tyr	Leu	Leu	Asn	Lys	Asn
			420					425					430		
Ile	Ala	Gln	Leu	Arg	Tyr	Gln	His	Gly	Leu	Gly	Thr	Pro	Asp	Leu	Arg
		435					440					445			
Gln	Thr	Leu	Pro	Asn	Leu	Lys	Asn	Phe	Met	Glu	His	Gly	Leu	Met	Val
	450					455					460				
Arg	Cys	Asp	Arg	His	His	Thr	Ser	Ser	Ala	Ile	Pro	Val	Pro	Lys	Arg
465						470					475				480
Gln	Ser	Ser	Ile	Phe	Gly	Gly	Ala	Asp	Val	Gly	Phe	Ser	Gly	Gly	Ile
				485					490					495	
Pro	Ser	Pro	Asp	Lys	Gly	His	Arg	Lys	Arg	Ala	Ser	Ser	Glu	Asn	Glu
			500					505					510		
Arg	Leu	Gln	Tyr	Lys	Thr	Pro	Pro	Pro	Ser	Tyr	Asn	Ser	Ala	Leu	Ala
		515					520					525			
Gln	Pro	Val	Thr	Thr	Val	Pro	Ser	Met	Gly	Glu	Thr	Glu	Arg	Lys	Ile
	530					535					540				

Thr Ser Leu Ser Ser Ser Leu Asp Thr Ser Leu Asp Phe Ser Lys Glu
 545 550 555 560
 Asn Lys Lys Lys Gly Glu Asp Leu Val Gly Ser Leu Asn Gly Gly His
 565 570 575
 Ala Asn Val His Pro Ser Gln Glu Gln Gly Glu Ala Leu Ser Gly His
 580 585 590
 Arg Ala Thr Val Asn Gly Thr Leu Leu Pro Ser Glu Gln Ala Gly Ser
 595 600 605
 Ala Ser Val Gln Leu Pro Gly Glu Phe His Pro Val Ser Glu Ala Glu
 610 615 620
 Leu Cys Cys Thr Val Glu Gln Ala Glu Glu Ile Ile Gly Leu Glu Ala
 625 630 635 640
 Gln Val Ser Pro Gln Val Ile Ser
 645

<210> 70
 <211> 241
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 70
 Met Ser Ala Ser Ala Ser Val Gly Gly Pro Val Pro Gln Pro Pro Pro
 1 5 10 15
 Gly Pro Ala Ala Ala Leu Pro Pro Gly Ser Ala Ala Arg Ala Leu His
 20 25 30
 Val Glu Leu Pro Ser Gln Gln Arg Arg Leu Arg His Leu Arg Asn Ile
 35 40 45
 Ala Ala Arg Asn Ile Val Asn Arg Asn Gly His Gln Leu Leu Asp Thr
 50 55 60
 Tyr Phe Thr Leu His Leu Cys Ser Thr Glu Lys Ile Tyr Lys Glu Phe
 65 70 75 80
 Tyr Arg Ser Glu Val Ile Lys Asn Ser Leu Asn Pro Thr Trp Arg Ser
 85 90 95
 Leu Asp Phe Gly Ile Met Pro Asp Arg Leu Asp Thr Ser Val Ser Cys
 100 105 110
 Phe Val Val Lys Ile Trp Gly Gly Lys Glu Asn Ile Tyr Gln Leu Leu

115					120					125						
Ile	Glu	Trp	Lys	Val	Cys	Leu	Asp	Gly	Leu	Lys	Tyr	Leu	Gly	Gln	Gln	
130					135					140						
Ile	His	Ala	Arg	Asn	Gln	Asn	Glu	Ile	Ile	Phe	Gly	Leu	Asn	Asp	Gly	
145					150					155					160	
Tyr	Tyr	Gly	Ala	Pro	Phe	Glu	His	Lys	Gly	Tyr	Ser	Asn	Ala	Gln	Lys	
					165					170					175	
Thr	Ile	Leu	Leu	Gln	Val	Asp	Gln	Asn	Cys	Val	Arg	Asn	Ser	Tyr	Asp	
					180					185					190	
Val	Phe	Ser	Leu	Leu	Arg	Leu	His	Arg	Ala	Gln	Cys	Ala	Ile	Lys	Gln	
					195					200					205	
Thr	Gln	Val	Thr	Val	Gln	Lys	Ile	Gly	Lys	Glu	Ile	Glu	Glu	Lys	Leu	
					210					215					220	
Arg	Leu	Thr	Ser	Thr	Ser	Asn	Glu	Leu	Lys	Lys	Lys	Val	Asn	Ala	Cys	
225					230					235					240	

Ser

<210> 71
 <211> 237
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 71																
Met	Ser	Ala	Ser	Ala	Ser	Val	Gly	Gly	Pro	Val	Pro	Gln	Pro	Pro	Pro	
1				5					10					15		
Gly	Pro	Ala	Ala	Ala	Leu	Pro	Pro	Gly	Ser	Ala	Ala	Arg	Ala	Leu	His	
				20				25							30	
Val	Glu	Leu	Pro	Ser	Gln	Gln	Arg	Arg	Leu	Arg	His	Leu	Arg	Asn	Ile	
				35				40							45	
Ala	Ala	Arg	Asn	Ile	Val	Asn	Arg	Asn	Gly	His	Gln	Leu	Leu	Asp	Thr	
				50				55							60	
Tyr	Phe	Thr	Leu	His	Leu	Cys	Ser	Thr	Glu	Lys	Ile	Tyr	Lys	Glu	Phe	
65					70					75					80	
Tyr	Arg	Ser	Glu	Val	Ile	Lys	Asn	Ser	Leu	Asn	Pro	Thr	Trp	Arg	Ser	
					85					90					95	

Leu Asp Phe Gly Ile Met Pro Asp Arg Leu Asp Thr Ser Val Ser Cys
 100 105 110
 Phe Val Val Lys Ile Trp Gly Gly Lys Glu Asn Ile Tyr Gln Leu Leu
 115 120 125
 Ile Glu Trp Lys Val Cys Leu Asp Gly Leu Lys Tyr Leu Gly Gln Gln
 130 135 140
 Ile His Ala Arg Asn Gln Asn Glu Ile Ile Phe Gly Leu Asn Asp Gly
 145 150 155 160
 Tyr Tyr Gly Ala Pro Phe Glu His Lys Gly Tyr Ser Asn Ala Gln Lys
 165 170 175
 Thr Ile Leu Leu Gln Val Asp Gln Asn Cys Val Arg Asn Ser Tyr Asp
 180 185 190
 Val Phe Ser Leu Leu Arg Leu His Arg Ala Gln Cys Ala Ile Lys Gln
 195 200 205
 Thr Gln Val Thr Val Gln Lys Ile Gly Lys Glu Ile Glu Glu Lys Leu
 210 215 220
 Arg Leu Thr Ser Thr Ser Asn Glu Leu Lys Lys Lys Lys
 225 230 235

<210> 72

<211> 1137

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 72

Met Ser Arg Arg Lys Pro Ala Ser Gly Gly Leu Ala Ala Ser Ser Ser
 1 5 10 15
 Ala Pro Ala Arg Gln Ala Val Leu Ser Arg Phe Phe Gln Ser Thr Gly
 20 25 30
 Ser Leu Lys Ser Thr Ser Ser Ser Thr Gly Ala Ala Asp Gln Val Asp
 35 40 45
 Pro Gly Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Pro Pro
 50 55 60
 Ala Pro Pro Ala Pro Ala Phe Pro Pro Gln Leu Pro Pro His Val Ala
 65 70 75 80

Thr	Glu	Ile	Asp	Arg	Arg	Lys	Lys	Arg	Pro	Leu	Glu	Asn	Asp	Gly	Pro	
				85					90					95		
Val	Lys	Lys	Lys	Val	Lys	Lys	Val	Gln	Gln	Lys	Glu	Gly	Gly	Ser	Asp	
			100					105					110			
Leu	Gly	Met	Ser	Gly	Asn	Ser	Glu	Pro	Lys	Lys	Cys	Leu	Arg	Thr	Arg	
		115					120					125				
Asn	Val	Ser	Lys	Ser	Leu	Glu	Lys	Leu	Lys	Glu	Phe	Cys	Cys	Asp	Ser	
	130					135					140					
Ala	Leu	Pro	Gln	Ser	Arg	Val	Gln	Thr	Glu	Ser	Leu	Gln	Glu	Arg	Phe	
145					150				155						160	
Ala	Val	Leu	Pro	Lys	Cys	Thr	Asp	Phe	Asp	Asp	Ile	Ser	Leu	Leu	His	
				165				170						175		
Ala	Lys	Asn	Ala	Val	Ser	Ser	Glu	Asp	Ser	Lys	Arg	Gln	Ile	Asn	Gln	
			180					185					190			
Lys	Asp	Thr	Thr	Leu	Phe	Asp	Leu	Ser	Gln	Phe	Gly	Ser	Ser	Asn	Thr	
		195					200					205				
Ser	His	Glu	Asn	Leu	Gln	Lys	Thr	Ala	Ser	Lys	Ser	Ala	Asn	Lys	Arg	
	210					215					220					
Ser	Lys	Ser	Ile	Tyr	Thr	Pro	Leu	Glu	Leu	Gln	Tyr	Ile	Glu	Met	Lys	
225					230					235					240	
Gln	Gln	His	Lys	Asp	Ala	Val	Leu	Cys	Val	Glu	Cys	Gly	Tyr	Lys	Tyr	
				245					250					255		
Arg	Phe	Phe	Gly	Glu	Asp	Ala	Glu	Ile	Ala	Ala	Arg	Glu	Leu	Asn	Ile	
			260					265					270			
Tyr	Cys	His	Leu	Asp	His	Asn	Phe	Met	Thr	Ala	Ser	Ile	Pro	Thr	His	
		275					280					285				
Arg	Leu	Phe	Val	His	Val	Arg	Arg	Leu	Val	Ala	Lys	Gly	Tyr	Lys	Val	
	290					295					300					
Gly	Val	Val	Lys	Gln	Thr	Glu	Thr	Ala	Ala	Leu	Lys	Ala	Ile	Gly	Asp	
305					310					315					320	
Asn	Arg	Ser	Ser	Leu	Phe	Ser	Arg	Lys	Leu	Thr	Ala	Leu	Tyr	Thr	Lys	
				325					330					335		
Ser	Thr	Leu	Ile	Gly	Glu	Asp	Val	Asn	Pro	Leu	Ile	Lys	Leu	Asp	Asp	
			340					345					350			
Ala	Val	Asn	Val	Asp	Glu	Ile	Met	Thr	Asp	Thr	Ser	Thr	Ser	Tyr	Leu	
		355					360					365				

Leu	Cys	Ile	Ser	Glu	Asn	Lys	Glu	Asn	Val	Arg	Asp	Lys	Lys	Lys	Gly
370						375					380				
Asn	Ile	Phe	Ile	Gly	Ile	Val	Gly	Val	Gln	Pro	Ala	Thr	Gly	Glu	Val
385					390					395					400
Val	Phe	Asp	Ser	Phe	Gln	Asp	Ser	Ala	Ser	Arg	Ser	Glu	Leu	Glu	Thr
				405					410					415	
Arg	Met	Ser	Ser	Leu	Gln	Pro	Val	Glu	Leu	Leu	Leu	Pro	Ser	Ala	Leu
			420					425					430		
Ser	Glu	Gln	Thr	Glu	Ala	Leu	Ile	His	Arg	Ala	Thr	Ser	Val	Ser	Val
			435				440					445			
Gln	Asp	Asp	Arg	Ile	Arg	Val	Glu	Arg	Met	Asp	Asn	Ile	Tyr	Phe	Glu
450					455					460					
Tyr	Ser	His	Ala	Phe	Gln	Ala	Val	Thr	Glu	Phe	Tyr	Ala	Lys	Asp	Thr
465					470					475					480
Val	Asp	Ile	Lys	Gly	Ser	Gln	Ile	Ile	Ser	Gly	Ile	Val	Asn	Leu	Glu
				485					490					495	
Lys	Pro	Val	Ile	Cys	Ser	Leu	Ala	Ala	Ile	Ile	Lys	Tyr	Leu	Lys	Glu
			500					505					510		
Phe	Asn	Leu	Glu	Lys	Met	Leu	Ser	Lys	Pro	Glu	Asn	Phe	Lys	Gln	Leu
515						520					525				
Ser	Ser	Lys	Met	Glu	Phe	Met	Thr	Ile	Asn	Gly	Thr	Thr	Leu	Arg	Asn
530						535					540				
Leu	Glu	Ile	Leu	Gln	Asn	Gln	Thr	Asp	Met	Lys	Thr	Lys	Gly	Ser	Leu
545					550					555					560
Leu	Trp	Val	Leu	Asp	His	Thr	Lys	Thr	Ser	Phe	Gly	Arg	Arg	Lys	Leu
				565					570					575	
Lys	Lys	Trp	Val	Thr	Gln	Pro	Leu	Leu	Lys	Leu	Arg	Glu	Ile	Asn	Ala
			580					585					590		
Arg	Leu	Asp	Ala	Val	Ser	Glu	Val	Leu	His	Ser	Glu	Ser	Ser	Val	Phe
595						600					605				
Gly	Gln	Ile	Glu	Asn	His	Leu	Arg	Lys	Leu	Pro	Asp	Ile	Gly	Arg	Gly
610					615					620					
Leu	Cys	Ser	Ile	Tyr	His	Lys	Lys	Cys	Ser	Thr	Gln	Glu	Phe	Phe	Leu
625					630					635					640
Ile	Val	Lys	Thr	Leu	Tyr	His	Leu	Lys	Ser	Glu	Phe	Gln	Ala	Ile	Ile
			645					650					655		

Pro	Ala	Val	Asn	Ser	His	Ile	Gln	Ser	Asp	Leu	Leu	Arg	Thr	Val	Ile	
			660					665					670			
Leu	Glu	Ile	Pro	Glu	Leu	Leu	Ser	Pro	Val	Glu	His	Tyr	Leu	Lys	Ile	
		675					680					685				
Leu	Asn	Glu	Gln	Ala	Ala	Lys	Val	Gly	Asp	Lys	Thr	Glu	Leu	Phe	Lys	
		690				695					700					
Asp	Leu	Ser	Asp	Phe	Pro	Leu	Ile	Lys	Lys	Arg	Lys	Asp	Glu	Ile	Gln	
705					710					715					720	
Gly	Val	Ile	Asp	Glu	Ile	Arg	Met	His	Leu	Gln	Glu	Ile	Arg	Lys	Ile	
			725						730					735		
Leu	Lys	Asn	Pro	Ser	Ala	Gln	Tyr	Val	Thr	Val	Ser	Gly	Gln	Glu	Phe	
			740					745					750			
Met	Ile	Glu	Ile	Lys	Asn	Ser	Ala	Val	Ser	Cys	Ile	Pro	Thr	Asp	Trp	
		755					760					765				
Val	Lys	Val	Gly	Ser	Thr	Lys	Ala	Val	Ser	Arg	Phe	His	Ser	Pro	Phe	
		770				775					780					
Ile	Val	Glu	Asn	Tyr	Arg	His	Leu	Asn	Gln	Leu	Arg	Glu	Gln	Leu	Val	
785					790				795						800	
Leu	Asp	Cys	Ser	Ala	Glu	Trp	Leu	Asp	Phe	Leu	Glu	Lys	Phe	Ser	Glu	
				805					810					815		
His	Tyr	His	Ser	Leu	Cys	Lys	Ala	Val	His	His	Leu	Ala	Thr	Val	Asp	
			820					825					830			
Cys	Ile	Phe	Ser	Leu	Ala	Lys	Val	Ala	Lys	Gln	Gly	Asp	Tyr	Cys	Arg	
		835					840					845				
Pro	Thr	Val	Gln	Glu	Glu	Arg	Lys	Ile	Val	Ile	Lys	Asn	Gly	Arg	His	
		850				855					860					
Pro	Val	Ile	Asp	Val	Leu	Leu	Gly	Glu	Gln	Asp	Gln	Tyr	Val	Pro	Asn	
865					870					875					880	
Asn	Thr	Asp	Leu	Ser	Glu	Asp	Ser	Glu	Arg	Val	Met	Ile	Ile	Thr	Gly	
			885						890					895		
Pro	Asn	Met	Gly	Gly	Lys	Ser	Ser	Tyr	Ile	Lys	Gln	Val	Ala	Leu	Ile	
			900					905					910			
Thr	Ile	Met	Ala	Gln	Ile	Gly	Ser	Tyr	Val	Pro	Ala	Glu	Glu	Ala	Thr	
		915					920					925				
Ile	Gly	Ile	Val	Asp	Gly	Ile	Phe	Thr	Arg	Met	Gly	Ala	Ala	Asp	Asn	
		930				935					940					

Ile	Tyr	Lys	Gly	Arg	Ser	Thr	Phe	Met	Glu	Glu	Leu	Thr	Asp	Thr	Ala	
945					950					955					960	
Glu	Ile	Ile	Arg	Lys	Ala	Thr	Ser	Gln	Ser	Leu	Val	Ile	Leu	Asp	Glu	
				965					970					975		
Leu	Gly	Arg	Gly	Thr	Ser	Thr	His	Asp	Gly	Ile	Ala	Ile	Ala	Tyr	Ala	
			980					985						990		
Thr	Leu	Glu	Tyr	Phe	Ile	Arg	Asp	Val	Lys	Ser	Leu	Thr	Leu	Phe	Val	
		995					1000					1005				
Thr	His	Tyr	Pro	Pro	Val	Cys	Glu	Leu	Glu	Lys	Asn	Tyr	Ser	His	Gln	
	1010					1015					1020					
Val	Gly	Asn	Tyr	His	Met	Gly	Phe	Leu	Val	Ser	Glu	Asp	Glu	Ser	Lys	
1025					1030					1035					1040	
Leu	Asp	Pro	Gly	Thr	Ala	Glu	Gln	Val	Pro	Asp	Phe	Val	Thr	Phe	Leu	
			1045					1050						1055		
Tyr	Gln	Ile	Thr	Arg	Gly	Ile	Ala	Ala	Arg	Ser	Tyr	Gly	Leu	Asn	Val	
		1060					1065						1070			
Ala	Lys	Leu	Ala	Asp	Val	Pro	Gly	Glu	Ile	Leu	Lys	Lys	Ala	Ala	His	
	1075						1080					1085				
Lys	Ser	Lys	Glu	Leu	Glu	Gly	Leu	Ile	Asn	Thr	Lys	Arg	Lys	Arg	Leu	
	1090					1095					1100					
Lys	Tyr	Phe	Ala	Lys	Leu	Trp	Thr	Met	His	Asn	Ala	Gln	Asp	Leu	Gln	
1105				1110					1115					1120		
Lys	Trp	Thr	Glu	Glu	Phe	Asn	Met	Glu	Glu	Thr	Gln	Thr	Ser	Leu	Leu	
			1125					1130					1135			

His

<210> 73

<211> 413

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 73

Met	Ser	Arg	Arg	Lys	Pro	Ala	Ser	Gly	Gly	Leu	Ala	Ala	Ser	Ser	Ser	
1				5					10					15		

Ala	Pro	Ala	Arg	Gln	Ala	Val	Leu	Ser	Arg	Phe	Phe	Gln	Ser	Thr	Gly	
			20					25					30			
Ser	Leu	Lys	Ser	Thr	Ser	Ser	Ser	Thr	Gly	Ala	Ala	Asp	Gln	Val	Asp	
		35					40					45				
Pro	Gly	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Pro	Pro	
	50					55					60					
Ala	Pro	Pro	Ala	Pro	Ala	Phe	Pro	Pro	Gln	Leu	Pro	Pro	His	Val	Ala	
65					70				75						80	
Thr	Glu	Ile	Asp	Arg	Arg	Lys	Lys	Arg	Pro	Leu	Glu	Asn	Asp	Gly	Pro	
				85				90						95		
Val	Lys	Lys	Lys	Val	Lys	Lys	Val	Gln	Gln	Lys	Glu	Gly	Gly	Ser	Asp	
			100					105					110			
Leu	Gly	Met	Ser	Gly	Asn	Ser	Glu	Pro	Lys	Lys	Cys	Leu	Arg	Thr	Arg	
		115					120					125				
Asn	Val	Ser	Lys	Ser	Leu	Glu	Lys	Leu	Lys	Glu	Phe	Cys	Cys	Asp	Ser	
	130					135					140					
Ala	Leu	Pro	Gln	Ser	Arg	Val	Gln	Thr	Glu	Ser	Leu	Gln	Glu	Arg	Phe	
145					150				155						160	
Ala	Val	Leu	Pro	Lys	Cys	Thr	Asp	Phe	Asp	Asp	Ile	Ser	Leu	Leu	His	
				165				170						175		
Ala	Lys	Asn	Ala	Val	Ser	Ser	Glu	Asp	Ser	Lys	Arg	Gln	Ile	Asn	Gln	
			180					185					190			
Lys	Asp	Thr	Thr	Leu	Phe	Asp	Leu	Ser	Gln	Phe	Gly	Ser	Ser	Asn	Thr	
		195					200					205				
Ser	His	Glu	Asn	Leu	Gln	Lys	Thr	Ala	Ser	Lys	Ser	Ala	Asn	Lys	Arg	
	210					215					220					
Ser	Lys	Ser	Ile	Tyr	Thr	Pro	Leu	Glu	Leu	Gln	Tyr	Ile	Glu	Met	Lys	
225					230					235					240	
Gln	Gln	His	Lys	Asp	Ala	Val	Leu	Cys	Val	Glu	Cys	Gly	Tyr	Lys	Tyr	
				245					250					255		
Arg	Phe	Phe	Gly	Glu	Asp	Ala	Glu	Ile	Ala	Ala	Arg	Glu	Leu	Asn	Ile	
			260					265					270			
Tyr	Cys	His	Leu	Asp	His	Asn	Phe	Met	Thr	Ala	Ser	Ile	Pro	Thr	His	
		275					280					285				
Arg	Leu	Phe	Val	His	Val	Arg	Arg	Leu	Val	Ala	Lys	Gly	Tyr	Lys	Val	
	290					295					300					

Gly Val Val Lys Gln Thr Glu Thr Ala Ala Leu Lys Ala Ile Gly Asp
 305 310 315 320
 Asn Arg Ser Ser Leu Phe Ser Arg Lys Leu Thr Ala Leu Tyr Thr Lys
 325 330 335
 Ser Thr Leu Ile Gly Glu Asp Val Asn Pro Leu Ile Lys Leu Asp Asp
 340 345 350
 Ala Val Asn Val Asp Glu Ile Met Thr Asp Thr Ser Thr Ser Tyr Leu
 355 360 365
 Leu Cys Ile Ser Glu Asn Lys Glu Asn Val Arg Asp Lys Lys Arg Ala
 370 375 380
 Thr Phe Leu Leu Ala Leu Trp Glu Cys Ser Leu Pro Gln Ala Arg Leu
 385 390 395 400
 Cys Leu Ile Val Ser Arg Thr Leu Leu Leu Val Gln Ser
 405 410

<210> 74

<211> 402

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
 encoded by genes with coding microsatellites

<400> 74

Met Ser Arg Arg Lys Pro Ala Ser Gly Gly Leu Ala Ala Ser Ser Ser
 1 5 10 15
 Ala Pro Ala Arg Gln Ala Val Leu Ser Arg Phe Phe Gln Ser Thr Gly
 20 25 30
 Ser Leu Lys Ser Thr Ser Ser Ser Thr Gly Ala Ala Asp Gln Val Asp
 35 40 45
 Pro Gly Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Pro Pro
 50 55 60
 Ala Pro Pro Ala Pro Ala Phe Pro Pro Gln Leu Pro Pro His Val Ala
 65 70 75 80
 Thr Glu Ile Asp Arg Arg Lys Lys Arg Pro Leu Glu Asn Asp Gly Pro
 85 90 95
 Val Lys Lys Lys Val Lys Lys Val Gln Gln Lys Glu Gly Gly Ser Asp
 100 105 110

Leu	Gly	Met	Ser	Gly	Asn	Ser	Glu	Pro	Lys	Lys	Cys	Leu	Arg	Thr	Arg		
		115					120					125					
Asn	Val	Ser	Lys	Ser	Leu	Glu	Lys	Leu	Lys	Glu	Phe	Cys	Cys	Asp	Ser		
		130				135					140						
Ala	Leu	Pro	Gln	Ser	Arg	Val	Gln	Thr	Glu	Ser	Leu	Gln	Glu	Arg	Phe		
145					150					155					160		
Ala	Val	Leu	Pro	Lys	Cys	Thr	Asp	Phe	Asp	Asp	Ile	Ser	Leu	Leu	His		
				165					170					175			
Ala	Lys	Asn	Ala	Val	Ser	Ser	Glu	Asp	Ser	Lys	Arg	Gln	Ile	Asn	Gln		
			180					185					190				
Lys	Asp	Thr	Thr	Leu	Phe	Asp	Leu	Ser	Gln	Phe	Gly	Ser	Ser	Asn	Thr		
		195					200					205					
Ser	His	Glu	Asn	Leu	Gln	Lys	Thr	Ala	Ser	Lys	Ser	Ala	Asn	Lys	Arg		
	210					215					220						
Ser	Lys	Ser	Ile	Tyr	Thr	Pro	Leu	Glu	Leu	Gln	Tyr	Ile	Glu	Met	Lys		
225					230					235					240		
Gln	Gln	His	Lys	Asp	Ala	Val	Leu	Cys	Val	Glu	Cys	Gly	Tyr	Lys	Tyr		
			245						250					255			
Arg	Phe	Phe	Gly	Glu	Asp	Ala	Glu	Ile	Ala	Ala	Arg	Glu	Leu	Asn	Ile		
			260					265					270				
Tyr	Cys	His	Leu	Asp	His	Asn	Phe	Met	Thr	Ala	Ser	Ile	Pro	Thr	His		
		275					280					285					
Arg	Leu	Phe	Val	His	Val	Arg	Arg	Leu	Val	Ala	Lys	Gly	Tyr	Lys	Val		
	290					295					300						
Gly	Val	Val	Lys	Gln	Thr	Glu	Thr	Ala	Ala	Leu	Lys	Ala	Ile	Gly	Asp		
305					310					315					320		
Asn	Arg	Ser	Ser	Leu	Phe	Ser	Arg	Lys	Leu	Thr	Ala	Leu	Tyr	Thr	Lys		
				325					330					335			
Ser	Thr	Leu	Ile	Gly	Glu	Asp	Val	Asn	Pro	Leu	Ile	Lys	Leu	Asp	Asp		
			340					345					350				
Ala	Val	Asn	Val	Asp	Glu	Ile	Met	Thr	Asp	Thr	Ser	Thr	Ser	Tyr	Leu		
		355					360					365					
Leu	Cys	Ile	Ser	Glu	Asn	Lys	Glu	Asn	Val	Arg	Asp	Lys	Lys	Lys	Gly		
	370					375					380						
Gln	His	Phe	Tyr	Trp	His	Cys	Gly	Ser	Ala	Ala	Cys	His	Arg	Arg	Gly		
385					390					395					400		

Cys Val

<210> 75

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 75

Ser Leu Val Arg Leu Ser Ser Cys Val

1

5

<210> 76

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 76

Arg Leu Ser Ser Cys Val Pro Val Ala

1

5

<210> 77

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 77

Cys Val Pro Val Ala Leu Met Ser Ala

1

5

<210> 78

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 78

Leu Leu His Ser Ala Pro Thr Pro Ser Leu
1 5 10

<210> 79

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 79

Phe Leu Ser Ala Ser His Phe Leu Leu
1 5

<210> 80

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 80

Arg Val Phe Phe Phe Tyr Gln His Leu
1 5

<210> 81

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 81

Ser Leu Tyr Lys Phe Ser Pro Phe Pro Leu
1 5 10

<210> 82

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 82

Lys Ile Phe Thr Phe Phe Phe Gln Leu
1 5

<210> 83

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 83

Ala Leu Leu Pro Ala Gly Pro Leu Thr
1 5

<210> 84

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 84

Leu Leu Pro Ala Gly Pro Leu Thr Gln Thr
1 5 10

<210> 85

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 85

Thr Leu Ser Pro Gly Trp Ser Ala Val
1 5

<210> 86

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 86

Ile Leu Leu Pro Gln Pro Pro Glu Trp Leu
1 5 10

<210> 87

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 87

Arg Gln Met Glu Ser Leu Gly Met Lys Leu
1 5 10

<210> 88

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 88

Val Glu Met Pro Thr Gly Trp Leu Leu
1 5

<210> 89

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 89

Val Glu Met Pro Thr Gly Trp Leu Leu Val
1 5 10

<210> 90

<211> 9

<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 90

Phe Gln Pro Pro Pro Ala Val Phe Ala
1 5

<210> 91

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 91

Ala Leu Trp Glu Cys Ser Leu Pro Gln Ala
1 5 10

<210> 92

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 92

Phe Leu Leu Ala Leu Trp Glu Cys Ser Leu
1 5 10

<210> 93

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 93

Leu Leu Ala Leu Trp Glu Cys Ser Leu
1 5

<210> 94
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 94
Ser Leu Pro Gln Ala Arg Leu Cys Leu
1 5

<210> 95
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 95
Leu Ile Val Ser Arg Thr Leu Leu Leu
1 5

<210> 96
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 96
Cys Leu Ile Val Ser Arg Thr Leu Leu
1 5

<210> 97
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 97

Ile Val Ser Arg Thr Leu Leu Leu Val

1

5

<210> 98

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 98

Lys Arg Ala Thr Phe Leu Leu Ala Leu

1

5

<210> 99

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 99

Lys Met Phe Phe Met Val Phe Leu Ile

1

5

<210> 100

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 100

Phe Leu Ile Ile Trp Gln Asn Thr Met

1

5

<210> 101

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 101
Gly Met Cys Val Lys Val Ser Ser Ile
1 5

<210> 102
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 102
Val Leu Arg Thr Glu Gly Glu Pro Leu
1 5

<210> 103
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 103
Leu Ile Val Ser Arg Thr Leu Leu Leu Val
1 5 10

<210> 104
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 104
Ser Leu Pro Gln Ala Arg Leu Cys Leu Ile
1 5 10

<210> 105
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Frameshift

Peptide

<400> 105

Cys Leu Ile Val Ser Arg Thr Leu Leu Leu
1 5 10

<210> 106

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Frameshift
Peptide

<400> 106

Arg Leu Cys Leu Ile Val Ser Arg Thr Leu
1 5 10

<210> 107

<211> 513

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 107

Met Gly Ala Ala Ala Lys Leu Ala Phe Ala Val Phe Leu Ile Ser Cys
1 5 10 15

Ser Ser Gly Ala Ile Leu Gly Arg Ser Glu Thr Gln Glu Cys Leu Phe
20 25 30

Phe Asn Ala Asn Trp Glu Lys Asp Arg Thr Asn Gln Thr Gly Val Glu
35 40 45

Pro Cys Tyr Gly Asp Lys Asp Lys Arg Arg His Cys Phe Ala Thr Trp
50 55 60

Lys Asn Ile Ser Gly Ser Ile Glu Ile Val Lys Gln Gly Cys Trp Leu
65 70 75 80

Asp Asp Ile Asn Cys Tyr Asp Arg Thr Asp Cys Val Glu Lys Lys Asp
85 90 95

Ser Pro Glu Val Tyr Phe Cys Cys Cys Glu Gly Asn Met Cys Asn Glu
100 105 110

Lys Phe Ser Tyr Phe Pro Glu Met Glu Val Thr Gln Pro Thr Ser Asn
115 120 125

Pro Val Thr Pro Lys Pro Pro Tyr Tyr Asn Ile Leu Leu Tyr Ser Leu
130 135 140

Val Pro Leu Met Leu Ile Ala Gly Ile Val Ile Cys Ala Phe Trp Val
145 150 155 160

Tyr Arg His His Lys Met Ala Tyr Pro Pro Val Leu Val Pro Thr Gln
165 170 175

Asp Pro Gly Pro Pro Pro Pro Ser Pro Leu Leu Gly Leu Lys Pro Leu
180 185 190

Gln Leu Leu Glu Val Lys Ala Arg Gly Arg Phe Gly Cys Val Trp Lys
195 200 205

Ala Gln Leu Leu Asn Glu Tyr Val Ala Val Lys Ile Phe Pro Ile Gln
210 215 220

Asp Lys Gln Ser Trp Gln Asn Glu Tyr Glu Val Tyr Ser Leu Pro Gly
225 230 235 240

Met Lys His Glu Asn Ile Leu Gln Phe Ile Gly Ala Glu Lys Arg Gly
245 250 255

Thr Ser Val Asp Val Asp Leu Trp Leu Ile Thr Ala Phe His Glu Lys
260 265 270

Gly Ser Leu Ser Asp Phe Leu Lys Ala Asn Val Val Ser Trp Asn Glu
275 280 285

Leu Cys His Ile Ala Glu Thr Met Ala Arg Gly Leu Ala Tyr Leu His
290 295 300

Glu Asp Ile Pro Gly Leu Lys Asp Gly His Lys Pro Ala Ile Ser His
305 310 315 320

Arg Asp Ile Lys Ser Lys Asn Val Leu Leu Lys Asn Asn Leu Thr Ala
325 330 335

Cys Ile Ala Asp Phe Gly Leu Ala Leu Lys Phe Glu Ala Gly Lys Ser
340 345 350

Ala Gly Asp Thr His Gly Gln Val Gly Thr Arg Arg Tyr Met Ala Pro
355 360 365

Glu Val Leu Glu Gly Ala Ile Asn Phe Gln Arg Asp Ala Phe Leu Arg
370 375 380

Ile Asp Met Tyr Ala Met Gly Leu Val Leu Trp Glu Leu Ala Ser Arg
385 390 395 400

Cys Thr Ala Ala Asp Gly Pro Val Asp Glu Tyr Met Leu Pro Phe Glu
405 410 415

Glu Glu Ile Gly Gln His Pro Ser Leu Glu Asp Met Gln Glu Val Val
420 425 430

Val His Lys Lys Lys Arg Pro Val Leu Arg Asp Tyr Trp Gln Lys His
435 440 445

Ala Gly Met Ala Met Leu Cys Glu Thr Ile Glu Glu Cys Trp Asp His
450 455 460

Asp Ala Glu Ala Arg Leu Ser Ala Gly Cys Val Gly Glu Arg Ile Thr
465 470 475 480

Gln Met Gln Arg Leu Thr Asn Ile Ile Thr Thr Glu Asp Ile Val Thr
485 490 495

Val Val Thr Met Val Thr Asn Val Asp Phe Pro Pro Lys Glu Ser Ser
500 505 510

Leu

<210> 108

<211> 148

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 108

Met Gly Ala Ala Ala Lys Leu Ala Phe Ala Val Phe Leu Ile Ser Cys
1 5 10 15

Ser Ser Gly Ala Ile Leu Gly Arg Ser Glu Thr Gln Glu Cys Leu Phe
20 25 30

Phe Asn Ala Asn Trp Glu Lys Asp Arg Thr Asn Gln Thr Gly Val Glu
35 40 45

Pro Cys Tyr Gly Asp Lys Asp Lys Arg Arg His Cys Phe Ala Thr Trp
50 55 60

Lys Asn Ile Ser Gly Ser Ile Glu Ile Val Lys Gln Gly Cys Trp Leu
65 70 75 80

Asp Asp Ile Asn Cys Tyr Asp Arg Thr Asp Cys Val Glu Lys Lys Thr
85 90 95

Ala Leu Lys Tyr Ile Phe Val Ala Val Arg Ala Ile Cys Val Met Lys
100 105 110

Ser Phe Leu Ile Phe Arg Arg Trp Lys Ser His Ser Pro Leu Gln Ile
115 120 125

Gln Leu His Leu Ser His Pro Ile Thr Thr Ser Cys Ser Ile Pro Trp
130 135 140

Cys His Leu Cys
145

<210> 109

<211> 440
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 109

Met Gly Ala Ala Ala Lys Leu Ala Phe Ala Val Phe Leu Ile Ser Cys
1 5 10 15

Ser Ser Gly Ala Ile Leu Gly Arg Ser Glu Thr Gln Glu Cys Leu Phe
20 25 30

Phe Asn Ala Asn Trp Glu Lys Asp Arg Thr Asn Gln Thr Gly Val Glu
35 40 45

Pro Cys Tyr Gly Asp Lys Asp Lys Arg Arg His Cys Phe Ala Thr Trp
50 55 60

Lys Asn Ile Ser Gly Ser Ile Glu Ile Val Lys Gln Gly Cys Trp Leu
65 70 75 80

Asp Asp Ile Asn Cys Tyr Asp Arg Thr Asp Cys Val Glu Lys Lys Asp
85 90 95

Ser Pro Glu Val Tyr Phe Cys Cys Cys Glu Gly Asn Met Cys Asn Glu
100 105 110

Lys Phe Ser Tyr Phe Pro Glu Met Glu Val Thr Gln Pro Thr Ser Asn
115 120 125

Pro Val Thr Pro Lys Pro Pro Tyr Tyr Asn Ile Leu Leu Tyr Ser Leu
130 135 140

Val Pro Leu Met Leu Ile Ala Gly Ile Val Ile Cys Ala Phe Trp Val
145 150 155 160

Tyr Arg His His Lys Met Ala Tyr Pro Pro Val Leu Val Pro Thr Gln
165 170 175

Asp Pro Gly Pro Pro Pro Pro Ser Pro Leu Leu Gly Leu Lys Pro Leu
180 185 190

Gln Leu Leu Glu Val Lys Ala Arg Gly Arg Phe Gly Cys Val Trp Lys
195 200 205

Ala Gln Leu Leu Asn Glu Tyr Val Ala Val Lys Ile Phe Pro Ile Gln
210 215 220

Asp Lys Gln Ser Trp Gln Asn Glu Tyr Glu Val Tyr Ser Leu Pro Gly
225 230 235 240

Met Lys His Glu Asn Ile Leu Gln Phe Ile Gly Ala Glu Lys Arg Gly
245 250 255

Thr Ser Val Asp Val Asp Leu Trp Leu Ile Thr Ala Phe His Glu Lys
260 265 270

Gly Ser Leu Ser Asp Phe Leu Lys Ala Asn Val Val Ser Trp Asn Glu
275 280 285

Leu Cys His Ile Ala Glu Thr Met Ala Arg Gly Leu Ala Tyr Leu His
290 295 300

Glu Asp Ile Pro Gly Leu Lys Asp Gly His Lys Pro Ala Ile Ser His
305 310 315 320

Arg Asp Ile Lys Ser Lys Asn Val Leu Leu Lys Asn Asn Leu Thr Ala
325 330 335

Cys Ile Ala Asp Phe Gly Leu Ala Leu Lys Phe Glu Ala Gly Lys Ser
340 345 350

Ala Gly Asp Thr His Gly Gln Val Gly Thr Arg Arg Tyr Met Ala Pro
355 360 365

Glu Val Leu Glu Gly Ala Ile Asn Phe Gln Arg Asp Ala Phe Leu Arg
370 375 380

Ile Asp Met Tyr Ala Met Gly Leu Val Leu Trp Glu Leu Ala Ser Arg
385 390 395 400

Cys Thr Ala Ala Asp Gly Pro Val Asp Glu Tyr Met Leu Pro Phe Glu
405 410 415

Glu Glu Ile Gly Gln His Pro Ser Leu Glu Asp Met Gln Glu Val Val
420 425 430

Val His Lys Lys Arg Gly Leu Phe
435 440

<210> 110
<211> 630
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 110

Met Val Leu Arg Lys Leu Ser Lys Lys Asp Val Thr Thr Lys Leu Lys
1 5 10 15

Ala Met Gln Glu Phe Gly Thr Met Cys Thr Glu Arg Asp Thr Glu Thr
20 25 30

Val Lys Gly Val Leu Pro Tyr Trp Pro Arg Ile Phe Cys Lys Ile Ser
35 40 45

Leu Asp His Asp Arg Arg Val Arg Glu Ala Thr Gln Gln Ala Phe Glu
50 55 60

Lys Leu Thr Leu Lys Val Lys Lys Gln Leu Ala Pro Tyr Leu Lys Ser
65 70 75 80

Leu Met Gly Tyr Trp Leu Met Ala Gln Cys Asp Thr Tyr Thr Pro Ala
85 90 95

Ala Phe Ala Ala Lys Asp Ala Phe Glu Ala Ala Phe Pro Pro Ser Lys
100 105 110

Gln Pro Glu Ala Ile Ala Phe Cys Lys Asp Glu Ile Thr Ser Val Leu

115						120						125					
Gln	Asp	His	Leu	Ile	Lys	Glu	Thr	Pro	Asp	Thr	Leu	Ser	Asp	Pro	Gln		
130						135						140					
Thr	Val	Pro	Glu	Glu	Glu	Arg	Glu	Ala	Lys	Phe	Tyr	Arg	Val	Val	Thr		
145						150						155			160		
Cys	Ser	Leu	Leu	Ala	Leu	Lys	Arg	Leu	Leu	Cys	Leu	Leu	Pro	Asp	Asn		
				165						170						175	
Glu	Leu	Asp	Ser	Leu	Glu	Glu	Lys	Phe	Lys	Ser	Leu	Leu	Ser	Gln	Asn		
			180					185						190			
Lys	Phe	Trp	Lys	Tyr	Gly	Lys	His	Ser	Val	Pro	Gln	Ile	Arg	Ser	Ala		
195						200						205					
Tyr	Phe	Glu	Leu	Val	Ser	Ala	Leu	Cys	Gln	Arg	Ile	Pro	Gln	Leu	Met		
210						215						220					
Lys	Glu	Glu	Ala	Ser	Lys	Val	Ser	Pro	Ser	Val	Leu	Leu	Ser	Ile	Asp		
225						230						235			240		
Asp	Ser	Asp	Pro	Ile	Val	Cys	Pro	Ala	Leu	Trp	Glu	Ala	Val	Leu	Tyr		
				245						250						255	
Thr	Leu	Thr	Thr	Ile	Glu	Asp	Cys	Trp	Leu	His	Val	Asn	Ala	Lys	Lys		
			260					265						270			
Ser	Val	Phe	Pro	Lys	Leu	Ser	Thr	Val	Ile	Arg	Glu	Gly	Gly	Arg	Gly		
275						280						285					
Leu	Ala	Thr	Val	Ile	Tyr	Pro	Tyr	Leu	Leu	Pro	Phe	Ile	Ser	Lys	Leu		
290						295						300					
Pro	His	Ser	Ile	Thr	Asn	Pro	Lys	Leu	Asp	Phe	Phe	Lys	Asn	Phe	Leu		
305						310						315			320		
Thr	Ser	Leu	Val	Ala	Gly	Leu	Ser	Thr	Glu	Arg	Thr	Lys	Thr	Ser	Ser		
				325						330						335	

Ser Glu Ser Ser Ala Val Ile Ser Ala Phe Tyr Glu Cys Leu Arg Phe
340 345 350

Ile Met Gln Gln Asn Leu Gly Glu Glu Glu Ile Glu Gln Met Leu Val
355 360 365

Asn Asp Gln Leu Ile Pro Phe Ile Asp Ala Val Leu Lys Asp Pro Gly
370 375 380

Leu Gln His Gly Gln Leu Phe Asn His Leu Ala Glu Thr Leu Ser Ser
385 390 395 400

Trp Glu Ala Lys Ala Asp Thr Glu Lys Asp Glu Lys Thr Ala His Asn
405 410 415

Leu Glu Asn Val Leu Ile His Phe Trp Glu Arg Leu Ser Glu Ile Cys
420 425 430

Val Ala Lys Ile Ser Glu Pro Glu Ala Asp Val Glu Ser Val Leu Gly
435 440 445

Val Ser Asn Leu Leu Gln Val Leu Gln Lys Pro Lys Ser Ser Leu Lys
450 455 460

Ser Ser Lys Lys Lys Asn Gly Lys Val Arg Phe Ala Asp Glu Ile Leu
465 470 475 480

Glu Ser Asn Lys Glu Asn Glu Lys Cys Val Ser Ser Glu Gly Glu Lys
485 490 495

Ile Glu Gly Trp Glu Leu Thr Thr Glu Pro Ser Leu Thr His Asn Ser
500 505 510

Ser Gly Leu Leu Ser Pro Leu Arg Lys Lys Pro Leu Glu Asp Leu Val
515 520 525

Cys Lys Leu Ala Asp Ile Ser Ile Asn Tyr Val Asn Glu Arg Lys Ser
530 535 540

Glu Gln His Leu Arg Phe Leu Ser Thr Leu Leu Asp Ser Phe Ser Ser

545					550					555					560
Ser	Arg	Val	Phe	Lys	Met	Leu	Leu	Gly	Asp	Glu	Lys	Gln	Ser	Ile	Val
				565					570					575	
Gln	Ala	Lys	Pro	Leu	Glu	Ile	Ala	Lys	Leu	Val	Gln	Lys	Asn	Pro	Ala
			580					585					590		
Val	Gln	Phe	Leu	Tyr	Gln	Lys	Leu	Ile	Gly	Trp	Leu	Asn	Glu	Asp	Gln
		595					600					605			
Arg	Lys	Asp	Phe	Gly	Phe	Leu	Val	Asp	Ile	Leu	Tyr	Ser	Ala	Leu	Arg
	610					615					620				
Cys	Cys	Asp	Asn	Asp	Met										
625					630										
<210>	111														
<211>	501														
<212>	PRT														
<213>	Artificial Sequence														
<220>															
<223>	Description of Artificial Sequence: polypeptides														
	encoded by genes with coding microsatellites														
<400>	111														
Met	Val	Leu	Arg	Lys	Leu	Ser	Lys	Lys	Asp	Val	Thr	Thr	Lys	Leu	Lys
1				5					10					15	
Ala	Met	Gln	Glu	Phe	Gly	Thr	Met	Cys	Thr	Glu	Arg	Asp	Thr	Glu	Thr
			20					25					30		
Val	Lys	Gly	Val	Leu	Pro	Tyr	Trp	Pro	Arg	Ile	Phe	Cys	Lys	Ile	Ser
		35					40					45			
Leu	Asp	His	Asp	Arg	Arg	Val	Arg	Glu	Ala	Thr	Gln	Gln	Ala	Phe	Glu
	50					55					60				
Lys	Leu	Thr	Leu	Lys	Val	Lys	Lys	Gln	Leu	Ala	Pro	Tyr	Leu	Lys	Ser
65					70					75					80

Leu Met Gly Tyr Trp Leu Met Ala Gln Cys Asp Thr Tyr Thr Pro Ala
85 90 95

Ala Phe Ala Ala Lys Asp Ala Phe Glu Ala Ala Phe Pro Pro Ser Lys
100 105 110

Gln Pro Glu Ala Ile Ala Phe Cys Lys Asp Glu Ile Thr Ser Val Leu
115 120 125

Gln Asp His Leu Ile Lys Glu Thr Pro Asp Thr Leu Ser Asp Pro Gln
130 135 140

Thr Val Pro Glu Glu Glu Arg Glu Ala Lys Phe Tyr Arg Val Val Thr
145 150 155 160

Cys Ser Leu Leu Ala Leu Lys Arg Leu Leu Cys Leu Leu Pro Asp Asn
165 170 175

Glu Leu Asp Ser Leu Glu Glu Lys Phe Lys Ser Leu Leu Ser Gln Asn
180 185 190

Lys Phe Trp Lys Tyr Gly Lys His Ser Val Pro Gln Ile Arg Ser Ala
195 200 205

Tyr Phe Glu Leu Val Ser Ala Leu Cys Gln Arg Ile Pro Gln Leu Met
210 215 220

Lys Glu Glu Ala Ser Lys Val Ser Pro Ser Val Leu Leu Ser Ile Asp
225 230 235 240

Asp Ser Asp Pro Ile Val Cys Pro Ala Leu Trp Glu Ala Val Leu Tyr
245 250 255

Thr Leu Thr Thr Ile Glu Asp Cys Trp Leu His Val Asn Ala Lys Lys
260 265 270

Ser Val Phe Pro Lys Leu Ser Thr Val Ile Arg Glu Gly Gly Arg Gly
275 280 285

Leu Ala Thr Val Ile Tyr Pro Tyr Leu Leu Pro Phe Ile Ser Lys Leu
290 295 300

Pro His Ser Ile Thr Asn Pro Lys Leu Asp Phe Phe Lys Asn Phe Leu
305 310 315 320

Thr Ser Leu Val Ala Gly Leu Ser Thr Glu Arg Thr Lys Thr Ser Ser
325 330 335

Ser Glu Ser Ser Ala Val Ile Ser Ala Phe Tyr Glu Cys Leu Arg Phe
340 345 350

Ile Met Gln Gln Asn Leu Gly Glu Glu Glu Ile Glu Gln Met Leu Val
355 360 365

Asn Asp Gln Leu Ile Pro Phe Ile Asp Ala Val Leu Lys Asp Pro Gly
370 375 380

Leu Gln His Gly Gln Leu Phe Asn His Leu Ala Glu Thr Leu Ser Ser
385 390 395 400

Trp Glu Ala Lys Ala Asp Thr Glu Lys Asp Glu Lys Thr Ala His Asn
405 410 415

Leu Glu Asn Val Leu Ile His Phe Trp Glu Arg Leu Ser Glu Ile Cys
420 425 430

Val Ala Lys Ile Ser Glu Pro Glu Ala Asp Val Glu Ser Val Leu Gly
435 440 445

Val Ser Asn Leu Leu Gln Val Leu Gln Lys Pro Lys Ser Ser Leu Lys
450 455 460

Ser Ser Lys Lys Lys Met Val Arg Leu Asp Leu Leu Met Arg Tyr Leu
465 470 475 480

Lys Ala Ile Lys Arg Met Lys Asn Val Tyr Leu Gln Lys Glu Arg Arg
485 490 495

Leu Lys Ala Gly Asn
500

<210> 112
<211> 470
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 112

Met Val Leu Arg Lys Leu Ser Lys Lys Asp Val Thr Thr Lys Leu Lys
1 5 10 15

Ala Met Gln Glu Phe Gly Thr Met Cys Thr Glu Arg Asp Thr Glu Thr
20 25 30

Val Lys Gly Val Leu Pro Tyr Trp Pro Arg Ile Phe Cys Lys Ile Ser
35 40 45

Leu Asp His Asp Arg Arg Val Arg Glu Ala Thr Gln Gln Ala Phe Glu
50 55 60

Lys Leu Thr Leu Lys Val Lys Lys Gln Leu Ala Pro Tyr Leu Lys Ser
65 70 75 80

Leu Met Gly Tyr Trp Leu Met Ala Gln Cys Asp Thr Tyr Thr Pro Ala
85 90 95

Ala Phe Ala Ala Lys Asp Ala Phe Glu Ala Ala Phe Pro Pro Ser Lys
100 105 110

Gln Pro Glu Ala Ile Ala Phe Cys Lys Asp Glu Ile Thr Ser Val Leu
115 120 125

Gln Asp His Leu Ile Lys Glu Thr Pro Asp Thr Leu Ser Asp Pro Gln
130 135 140

Thr Val Pro Glu Glu Glu Arg Glu Ala Lys Phe Tyr Arg Val Val Thr
145 150 155 160

Cys Ser Leu Leu Ala Leu Lys Arg Leu Leu Cys Leu Leu Pro Asp Asn
165 170 175

Glu Leu Asp Ser Leu Glu Glu Lys Phe Lys Ser Leu Leu Ser Gln Asn
180 185 190

Lys Phe Trp Lys Tyr Gly Lys His Ser Val Pro Gln Ile Arg Ser Ala
195 200 205

Tyr Phe Glu Leu Val Ser Ala Leu Cys Gln Arg Ile Pro Gln Leu Met
210 215 220

Lys Glu Glu Ala Ser Lys Val Ser Pro Ser Val Leu Leu Ser Ile Asp
225 230 235 240

Asp Ser Asp Pro Ile Val Cys Pro Ala Leu Trp Glu Ala Val Leu Tyr
245 250 255

Thr Leu Thr Thr Ile Glu Asp Cys Trp Leu His Val Asn Ala Lys Lys
260 265 270

Ser Val Phe Pro Lys Leu Ser Thr Val Ile Arg Glu Gly Gly Arg Gly
275 280 285

Leu Ala Thr Val Ile Tyr Pro Tyr Leu Leu Pro Phe Ile Ser Lys Leu
290 295 300

Pro His Ser Ile Thr Asn Pro Lys Leu Asp Phe Phe Lys Asn Phe Leu
305 310 315 320

Thr Ser Leu Val Ala Gly Leu Ser Thr Glu Arg Thr Lys Thr Ser Ser
325 330 335

Ser Glu Ser Ser Ala Val Ile Ser Ala Phe Tyr Glu Cys Leu Arg Phe
340 345 350

Ile Met Gln Gln Asn Leu Gly Glu Glu Glu Ile Glu Gln Met Leu Val
355 360 365

Asn Asp Gln Leu Ile Pro Phe Ile Asp Ala Val Leu Lys Asp Pro Gly
370 375 380

Leu Gln His Gly Gln Leu Phe Asn His Leu Ala Glu Thr Leu Ser Ser

385 390 395 400

Trp Glu Ala Lys Ala Asp Thr Glu Lys Asp Glu Lys Thr Ala His Asn
405 410 415

Leu Glu Asn Val Leu Ile His Phe Trp Glu Arg Leu Ser Glu Ile Cys
420 425 430

Val Ala Lys Ile Ser Glu Pro Glu Ala Asp Val Glu Ser Val Leu Gly
435 440 445

Val Ser Asn Leu Leu Gln Val Leu Gln Lys Pro Lys Ser Ser Leu Lys
450 455 460

Ser Ser Lys Lys Lys Trp
465 470

<210> 113
<211> 471
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 113

Met Val Leu Arg Lys Leu Ser Lys Lys Asp Val Thr Thr Lys Leu Lys
1 5 10 15

Ala Met Gln Glu Phe Gly Thr Met Cys Thr Glu Arg Asp Thr Glu Thr
20 25 30

Val Lys Gly Val Leu Pro Tyr Trp Pro Arg Ile Phe Cys Lys Ile Ser
35 40 45

Leu Asp His Asp Arg Arg Val Arg Glu Ala Thr Gln Gln Ala Phe Glu
50 55 60

Lys Leu Thr Leu Lys Val Lys Lys Gln Leu Ala Pro Tyr Leu Lys Ser
65 70 75 80

Leu Met Gly Tyr Trp Leu Met Ala Gln Cys Asp Thr Tyr Thr Pro Ala
85 90 95

Ala Phe Ala Ala Lys Asp Ala Phe Glu Ala Ala Phe Pro Pro Ser Lys
100 105 110

Gln Pro Glu Ala Ile Ala Phe Cys Lys Asp Glu Ile Thr Ser Val Leu
115 120 125

Gln Asp His Leu Ile Lys Glu Thr Pro Asp Thr Leu Ser Asp Pro Gln
130 135 140

Thr Val Pro Glu Glu Glu Arg Glu Ala Lys Phe Tyr Arg Val Val Thr
145 150 155 160

Cys Ser Leu Leu Ala Leu Lys Arg Leu Leu Cys Leu Leu Pro Asp Asn
165 170 175

Glu Leu Asp Ser Leu Glu Glu Lys Phe Lys Ser Leu Leu Ser Gln Asn
180 185 190

Lys Phe Trp Lys Tyr Gly Lys His Ser Val Pro Gln Ile Arg Ser Ala
195 200 205

Tyr Phe Glu Leu Val Ser Ala Leu Cys Gln Arg Ile Pro Gln Leu Met
210 215 220

Lys Glu Glu Ala Ser Lys Val Ser Pro Ser Val Leu Leu Ser Ile Asp
225 230 235 240

Asp Ser Asp Pro Ile Val Cys Pro Ala Leu Trp Glu Ala Val Leu Tyr
245 250 255

Thr Leu Thr Thr Ile Glu Asp Cys Trp Leu His Val Asn Ala Lys Lys
260 265 270

Ser Val Phe Pro Lys Leu Ser Thr Val Ile Arg Glu Gly Gly Arg Gly
275 280 285

Leu Ala Thr Val Ile Tyr Pro Tyr Leu Leu Pro Phe Ile Ser Lys Leu
290 295 300

Pro His Ser Ile Thr Asn Pro Lys Leu Asp Phe Phe Lys Asn Phe Leu
305 310 315 320

Thr Ser Leu Val Ala Gly Leu Ser Thr Glu Arg Thr Lys Thr Ser Ser
325 330 335

Ser Glu Ser Ser Ala Val Ile Ser Ala Phe Tyr Glu Cys Leu Arg Phe
340 345 350

Ile Met Gln Gln Asn Leu Gly Glu Glu Glu Ile Glu Gln Met Leu Val
355 360 365

Asn Asp Gln Leu Ile Pro Phe Ile Asp Ala Val Leu Lys Asp Pro Gly
370 375 380

Leu Gln His Gly Gln Leu Phe Asn His Leu Ala Glu Thr Leu Ser Ser
385 390 395 400

Trp Glu Ala Lys Ala Asp Thr Glu Lys Asp Glu Lys Thr Ala His Asn
405 410 415

Leu Glu Asn Val Leu Ile His Phe Trp Glu Arg Leu Ser Glu Ile Cys
420 425 430

Val Ala Lys Ile Ser Glu Pro Glu Ala Asp Val Glu Ser Val Leu Gly
435 440 445

Val Ser Asn Leu Leu Gln Val Leu Gln Lys Pro Lys Ser Ser Leu Lys
450 455 460

Ser Ser Lys Lys Lys Lys Trp
465 470

<210> 114

<211> 1455

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 114

Met Ala Gly Arg Pro Leu Arg Ile Gly Asp Gln Leu Val Leu Glu Glu
1 5 10 15

Asp Tyr Asp Glu Thr Tyr Ile Pro Ser Glu Gln Glu Ile Leu Glu Phe
20 25 30

Ala Arg Glu Ile Gly Ile Asp Pro Ile Lys Glu Pro Glu Leu Met Trp
35 40 45

Leu Ala Arg Glu Gly Ile Val Ala Pro Leu Pro Gly Glu Trp Lys Pro
50 55 60

Cys Gln Asp Ile Thr Gly Asp Ile Tyr Tyr Phe Asn Phe Ala Asn Gly
65 70 75 80

Gln Ser Met Trp Asp His Pro Cys Asp Glu His Tyr Arg Ser Leu Val
85 90 95

Ile Gln Glu Arg Ala Lys Leu Ser Thr Ser Gly Ala Ile Lys Lys Lys
100 105 110

Lys Lys Lys Lys Glu Lys Lys Asp Lys Lys Asp Arg Asp Pro Pro Lys
115 120 125

Ser Ser Leu Ala Leu Gly Ser Ser Leu Ala Pro Val His Val Pro Leu
130 135 140

Gly Gly Leu Ala Pro Leu Arg Gly Leu Val Asp Thr Pro Pro Ser Ala
145 150 155 160

Leu Arg Gly Ser Gln Ser Val Ser Leu Gly Ser Ser Val Glu Ser Gly
165 170 175

Arg Gln Leu Gly Glu Leu Met Leu Pro Ser Gln Gly Leu Lys Thr Ser
180 185 190

Ala Tyr Thr Lys Gly Leu Leu Gly Ser Ile Tyr Glu Asp Lys Thr Ala
195 200 205

Leu Ser Leu Leu Gly Leu Gly Glu Glu Thr Asn Glu Glu Asp Glu Glu
210 215 220

Glu Ser Asp Asn Gln Ser Val His Ser Ser Ser Glu Pro Leu Arg Asn
225 230 235 240

Leu His Leu Asp Ile Gly Ala Leu Gly Gly Asp Phe Glu Tyr Glu Glu
245 250 255

Ser Leu Arg Thr Ser Gln Pro Glu Glu Lys Lys Asp Val Ser Leu Asp
260 265 270

Ser Asp Ala Ala Gly Pro Pro Thr Pro Cys Lys Pro Ser Ser Pro Gly
275 280 285

Ala Asp Ser Ser Leu Ser Ser Ala Val Gly Lys Gly Arg Gln Gly Ser
290 295 300

Gly Ala Arg Pro Gly Leu Pro Glu Lys Glu Glu Asn Glu Lys Ser Glu
305 310 315 320

Pro Lys Ile Cys Arg Asn Leu Val Thr Pro Lys Ala Asp Pro Thr Gly
325 330 335

Ser Glu Pro Ala Lys Ala Ser Glu Lys Glu Ala Pro Glu Asp Thr Val
340 345 350

Asp Ala Gly Glu Glu Gly Ser Arg Arg Glu Glu Ala Ala Lys Glu Pro
355 360 365

Lys Lys Lys Ala Ser Ala Leu Glu Glu Gly Ser Ser Asp Ala Ser Gln
370 375 380

Glu Leu Glu Ile Ser Glu His Met Lys Glu Pro Gln Leu Ser Asp Ser
385 390 395 400

Ile Ala Ser Asp Pro Lys Ser Phe His Gly Leu Asp Phe Gly Phe Arg
405 410 415

Ser Arg Ile Ser Glu His Leu Leu Asp Val Asp Val Leu Ser Pro Val

420

425

430

Leu Gly Gly Ala Cys Arg Gln Ala Gln Gln Pro Leu Gly Ile Glu Asp
 435 440 445

Lys Asp Asp Ser Gln Ser Ser Gln Asp Glu Leu Gln Ser Lys Gln Ser
 450 455 460

Lys Gly Leu Glu Glu Arg Tyr His Arg Leu Ser Pro Pro Leu Pro His
 465 470 475 480

Glu Glu Arg Ala Gln Ser Pro Pro Arg Ser Leu Ala Thr Glu Glu Glu
 485 490 495

Pro Pro Gln Gly Pro Glu Gly Gln Pro Glu Trp Lys Glu Ala Glu Glu
 500 505 510

Leu Gly Glu Asp Ser Ala Ala Ser Leu Ser Leu Gln Leu Ser Leu Gln
 515 520 525

Arg Glu Gln Ala Pro Ser Pro Pro Ala Ala Cys Glu Lys Gly Lys Glu
 530 535 540

Gln His Ser Gln Ala Glu Glu Leu Gly Pro Gly Gln Glu Glu Ala Glu
 545 550 555 560

Asp Pro Glu Glu Lys Val Ala Val Ser Pro Thr Pro Pro Val Ser Pro
 565 570 575

Glu Val Arg Ser Thr Glu Pro Val Ala Pro Pro Glu Gln Leu Ser Glu
 580 585 590

Ala Ala Leu Lys Ala Met Glu Glu Ala Val Ala Gln Val Leu Glu Gln
 595 600 605

Asp Gln Arg His Leu Leu Glu Ser Lys Gln Glu Lys Met Gln Gln Leu
 610 615 620

Arg Glu Lys Leu Cys Gln Glu Glu Glu Glu Glu Ile Leu Arg Leu His
 625 630 635 640

Gln Gln Lys Glu Gln Ser Leu Ser Ser Leu Arg Glu Arg Leu Gln Lys
645 650 655

Ala Ile Glu Glu Glu Glu Ala Arg Met Arg Glu Glu Glu Ser Gln Arg
660 665 670

Leu Ser Trp Leu Arg Ala Gln Val Gln Ser Ser Thr Gln Ala Asp Glu
675 680 685

Asp Gln Ile Arg Ala Glu Gln Glu Ala Ser Leu Gln Lys Leu Arg Glu
690 695 700

Glu Leu Glu Ser Gln Gln Lys Ala Glu Arg Ala Ser Leu Glu Gln Lys
705 710 715 720

Asn Arg Gln Met Leu Glu Gln Leu Lys Glu Glu Ile Glu Ala Ser Glu
725 730 735

Lys Ser Glu Gln Ala Ala Leu Asn Ala Ala Lys Glu Lys Ala Leu Gln
740 745 750

Gln Leu Arg Glu Gln Leu Glu Gly Glu Arg Lys Glu Ala Val Ala Thr
755 760 765

Leu Glu Lys Glu His Ser Ala Glu Leu Glu Arg Leu Cys Ser Ser Leu
770 775 780

Glu Ala Lys His Arg Glu Val Val Ser Ser Leu Gln Lys Lys Ile Gln
785 790 795 800

Glu Ala Gln Gln Lys Glu Glu Ala Gln Leu Gln Lys Cys Leu Gly Gln
805 810 815

Val Glu His Arg Val His Gln Lys Ser Tyr His Val Ala Gly Tyr Glu
820 825 830

His Glu Leu Ser Ser Leu Leu Arg Glu Lys Arg Gln Glu Val Glu Gly
835 840 845

Glu His Glu Arg Arg Leu Asp Lys Met Lys Glu Glu His Gln Gln Val

850		855		860											
Met	Ala	Lys	Ala	Arg	Glu	Gln	Tyr	Glu	Ala	Glu	Glu	Arg	Lys	Gln	Arg
865					870					875					880
Ala	Glu	Leu	Leu	Gly	His	Leu	Thr	Gly	Glu	Leu	Glu	Arg	Leu	Gln	Arg
				885					890					895	
Ala	His	Glu	Arg	Glu	Leu	Glu	Thr	Val	Arg	Gln	Glu	Gln	His	Lys	Arg
			900					905					910		
Leu	Glu	Asp	Leu	Arg	Arg	Arg	His	Arg	Glu	Gln	Glu	Arg	Lys	Leu	Gln
		915					920					925			
Asp	Leu	Glu	Leu	Asp	Leu	Glu	Thr	Arg	Ala	Lys	Asp	Val	Lys	Ala	Arg
	930					935					940				
Leu	Ala	Leu	Leu	Glu	Val	Gln	Glu	Glu	Thr	Ala	Arg	Arg	Glu	Lys	Gln
945					950					955					960
Gln	Leu	Leu	Asp	Val	Gln	Arg	Gln	Val	Ala	Leu	Lys	Ser	Glu	Glu	Ala
			965						970					975	
Thr	Ala	Thr	His	Gln	Gln	Leu	Glu	Glu	Ala	Gln	Lys	Glu	His	Thr	His
			980						985				990		
Leu	Leu	Gln	Ser	Asn	Gln	Gln	Leu	Arg	Glu	Ile	Leu	Asp	Glu	Leu	Gln
		995					1000					1005			
Ala	Arg	Lys	Leu	Lys	Leu	Glu	Ser	Gln	Val	Asp	Leu	Leu	Gln	Ala	
	1010					1015					1020				
Gln	Ser	Gln	Gln	Leu	Gln	Lys	His	Phe	Ser	Ser	Leu	Glu	Ala	Glu	
	1025					1030					1035				
Ala	Gln	Lys	Lys	Gln	His	Leu	Leu	Arg	Glu	Val	Thr	Val	Glu	Glu	
	1040					1045					1050				
Asn	Asn	Ala	Ser	Pro	His	Phe	Glu	Pro	Asp	Leu	His	Ile	Glu	Asp	
	1055					1060					1065				

Leu Arg Lys Ser Leu Gly Thr Asn Gln Thr Lys Glu Val Ser Ser
1070 1075 1080

Ser Leu Ser Gln Ser Lys Glu Asp Leu Tyr Leu Asp Ser Leu Ser
1085 1090 1095

Ser His Asn Val Trp His Leu Leu Ser Ala Glu Gly Val Ala Leu
1100 1105 1110

Arg Ser Ala Lys Glu Phe Leu Val Gln Gln Thr Arg Ser Met Arg
1115 1120 1125

Arg Arg Gln Thr Ala Leu Lys Ala Ala Gln Gln His Trp Arg His
1130 1135 1140

Glu Leu Ala Ser Ala Gln Glu Val Ala Lys Asp Pro Pro Gly Ile
1145 1150 1155

Lys Ala Leu Glu Asp Met Arg Lys Asn Leu Glu Lys Glu Thr Arg
1160 1165 1170

His Leu Asp Glu Met Lys Ser Ala Met Arg Lys Gly His Asn Leu
1175 1180 1185

Leu Lys Lys Lys Glu Glu Lys Leu Asn Gln Leu Glu Ser Ser Leu
1190 1195 1200

Trp Glu Glu Ala Ser Asp Glu Gly Thr Leu Gly Gly Ser Pro Thr
1205 1210 1215

Lys Lys Ala Val Thr Phe Asp Leu Ser Asp Met Asp Ser Leu Ser
1220 1225 1230

Ser Glu Ser Ser Glu Ser Phe Ser Pro Pro His Leu Asp Ser Thr
1235 1240 1245

Pro Ser Leu Thr Ser Arg Lys Ile His Gly Leu Ser His Ser Leu
1250 1255 1260

Arg Gln Ile Ser Ser Gln Leu Ser Ser Val Leu Ser Ile Leu Asp

1265		1270		1275
Ser Leu Asn Pro Gln Ser Pro Pro Pro Leu Leu Ala Ser Met Pro				
1280		1285		1290
Ala Gln Leu Pro Pro Arg Asp Pro Lys Ser Thr Pro Thr Pro Thr				
1295		1300		1305
Tyr Tyr Gly Ser Leu Ala Arg Phe Ser Ala Leu Ser Ser Ala Thr				
1310		1315		1320
Pro Thr Ser Thr Gln Trp Ala Trp Asp Ser Gly Gln Gly Pro Arg				
1325		1330		1335
Leu Pro Ser Ser Val Ala Gln Thr Val Asp Asp Phe Leu Leu Glu				
1340		1345		1350
Lys Trp Arg Lys Tyr Phe Pro Ser Gly Ile Pro Leu Leu Ser Asn				
1355		1360		1365
Ser Pro Thr Pro Leu Glu Ser Arg Leu Gly Tyr Met Ser Ala Ser				
1370		1375		1380
Glu Gln Leu Arg Leu Leu Gln His Ser His Ser Gln Val Pro Glu				
1385		1390		1395
Ala Gly Ser Thr Thr Phe Gln Gly Ile Ile Glu Ala Asn Arg Arg				
1400		1405		1410
Trp Leu Glu Arg Val Lys Asn Asp Pro Arg Leu Pro Leu Phe Ser				
1415		1420		1425
Ser Thr Pro Lys Pro Lys Ala Thr Leu Ser Leu Leu Gln Leu Gly				
1430		1435		1440
Leu Asp Glu His Asn Arg Val Lys Val Tyr Arg Phe				
1445		1450		1455

<210> 115
 <211> 136
 <212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 115

Met Ala Gly Arg Pro Leu Arg Ile Gly Asp Gln Leu Val Leu Glu Glu
1 5 10 15

Asp Tyr Asp Glu Thr Tyr Ile Pro Ser Glu Gln Glu Ile Leu Glu Phe
20 25 30

Ala Arg Glu Ile Gly Ile Asp Pro Ile Lys Glu Pro Glu Leu Met Trp
35 40 45

Leu Ala Arg Glu Gly Ile Val Ala Pro Leu Pro Gly Glu Trp Lys Pro
50 55 60

Cys Gln Asp Ile Thr Gly Asp Ile Tyr Tyr Phe Asn Phe Ala Asn Gly
65 70 75 80

Gln Ser Met Trp Asp His Pro Cys Asp Glu His Tyr Arg Ser Leu Val
85 90 95

Ile Gln Glu Arg Ala Lys Leu Ser Thr Ser Gly Ala Ile Lys Lys Lys
100 105 110

Lys Lys Lys Arg Lys Arg Lys Thr Arg Arg Thr Glu Thr Pro Pro Lys
115 120 125

Val Arg Trp Pro Trp Val Pro His
130 135

<210> 116

<211> 202

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 116

Met Ala Gly Arg Pro Leu Arg Ile Gly Asp Gln Leu Val Leu Glu Glu
1 5 10 15

Asp Tyr Asp Glu Thr Tyr Ile Pro Ser Glu Gln Glu Ile Leu Glu Phe
20 25 30

Ala Arg Glu Ile Gly Ile Asp Pro Ile Lys Glu Pro Glu Leu Met Trp
35 40 45

Leu Ala Arg Glu Gly Ile Val Ala Pro Leu Pro Gly Glu Trp Lys Pro
50 55 60

Cys Gln Asp Ile Thr Gly Asp Ile Tyr Tyr Phe Asn Phe Ala Asn Gly
65 70 75 80

Gln Ser Met Trp Asp His Pro Cys Asp Glu His Tyr Arg Ser Leu Val
85 90 95

Ile Gln Glu Arg Ala Lys Leu Ser Thr Ser Gly Ala Ile Lys Lys Lys
100 105 110

Lys Lys Lys Gly Lys Glu Arg Gln Glu Gly Gln Arg Pro Pro Gln Lys
115 120 125

Phe Ala Gly Leu Gly Phe Leu Ile Ser Pro Ser Ser Cys Ser Ser Trp
130 135 140

Gly Pro Gly Ser Phe Thr Arg Ser Cys Gly Tyr Pro Thr Leu Cys Ser
145 150 155 160

Ser Trp Ile Ser Lys Arg Glu Pro Gly Glu Leu Ser Gly Val Trp Thr
165 170 175

Ser Ala Trp Arg Thr His Ala Ala Phe Thr Gly Ser Gln Asp Leu Cys
180 185 190

Leu Tyr Lys Gly Ser Leu Gly Leu His Ile
195 200

<210> 117

<211> 203
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
encoded by genes with coding microsatellites

<400> 86

Met Ala Gly Arg Pro Leu Arg Ile Gly Asp Gln Leu Val Leu Glu Glu
1 5 10 15

Asp Tyr Asp Glu Thr Tyr Ile Pro Ser Glu Gln Glu Ile Leu Glu Phe
20 25 30

Ala Arg Glu Ile Gly Ile Asp Pro Ile Lys Glu Pro Glu Leu Met Trp
35 40 45

Leu Ala Arg Glu Gly Ile Val Ala Pro Leu Pro Gly Glu Trp Lys Pro
50 55 60

Cys Gln Asp Ile Thr Gly Asp Ile Tyr Tyr Phe Asn Phe Ala Asn Gly
65 70 75 80

Gln Ser Met Trp Asp His Pro Cys Asp Glu His Tyr Arg Ser Leu Val
85 90 95

Ile Gln Glu Arg Ala Lys Leu Ser Thr Ser Gly Ala Ile Lys Lys Lys
100 105 110

Lys Lys Lys Lys Gly Lys Glu Arg Gln Glu Gly Gln Arg Pro Pro Gln
115 120 125

Lys Phe Ala Gly Leu Gly Phe Leu Ile Ser Pro Ser Ser Cys Ser Ser
130 135 140

Trp Gly Pro Gly Ser Phe Thr Arg Ser Cys Gly Tyr Pro Thr Leu Cys
145 150 155 160

Ser Ser Trp Ile Ser Lys Arg Glu Pro Gly Glu Leu Ser Gly Val Trp
165 170 175

Thr Ser Ala Trp Arg Thr His Ala Ala Phe Thr Gly Ser Gln Asp Leu
180 185 190

Cys Leu Tyr Lys Gly Ser Leu Gly Leu His Ile
195 200